United States Court of Appeals

FOR THE EIGHTH CIRCUIT.

No. 17,441.

CIVIL.

JOHN DEERE COMPANY OF KANSAS CITY,
a Corporation and DEERE & COMPANY,
a Corporation,
Appellants,

vs.

WILLIAM T. GRAHAM, and GRAHAM PLOW, INC.,
Appellees.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES
FOR THE WESTERN DISTRICT OF MISSOURI,
WESTERN DIVISION.

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WESTERN DIVISION

WILLIAM T. GRAHAM AND GRAHAM PLOW, INC., a corporation, Plaintiffs,

vs.

JOHN DEERE COMPANY OF KANSAS CITY, a corporation, Defendant.

Civil Action No. 12,538-2
Infringement of Letters Patent No. 2,627,798

COMPLAINT.

(Filed September 24, 1959.)

Now come the Plaintiffs, WILLIAM T. GRAHAM and GRAHAM PLOW, INC., and for their complaint against Defendant, JOHN DEERE COMPANY OF KANSAS CITY, state as follows:

1. This is a suit for infringement of Letters Patent arising under the Patent Laws of the United States.

2. Plaintiff, WILLIAM T. GRAHAM, is a citizen of the United States and a resident of Amarillo, County of Potter, State of Texas. Plaintiff, GRAHAM PLOW, INC., is a private corporation and duly organized under the laws of the State of Texas, with a principal place of business at Amarillo, County of Potter, State of Texas.

3. Defendant, John Deere Company of Kansas City, is a corporation organized and existing under and by virtue of the laws of the State of Missouri, having a principal place of business at Kansas City, Jackson County, Missouri, within the Western District, Western Division, of Missouri.

4. Plaintiff, William T. Graham, has been and now is the owner of Letters Patent of the United States No. 2,627,-798, issued February 10, 1953, for "Clamp for Vibrating Shank Plows", which were duly and legally issued to him by the United States Patent Office. By the grant of said Letters Patent there was secured to the grantee, his heirs, legal representatives and assigns, for the full term of seven-

teen years, from and after the date of issuance of said Letters Patent, the exclusive right and liberty of making, using or vending to others to be used the said invention throughout the United States and territories thereof, as will more fully and at large appear in and by said Letters Patent or duly certified copies thereof which will be in court produced as may be required.

5. Plaintiff, Graham Plow, Inc., has been duly authorized by Plaintiff, William T. Graham, to manufacture, use and sell devices embodying the inventions disclosed and claimed in the Letters Patent aforesaid.

6. Plaintiffs have been and now are engaged in the business of manufacturing and selling deep chisel plows and equipment used in connection therewith, and have expended large sums of money in the manufacture, sale and advertising of such devices and have built up a large and substantial business in such manufacture and sale of said devices.

7. Said Letters Patent of the United States No. 2,627,798 have been held valid and infringed by the Court of Appeals for the Fifth Circuit (*Jeoffroy Mfg., Inc.*, v. *William T. Graham, William T. Graham* v. *Jeoffroy Mfg., Inc.*, 219 F.2d 511; 256 F.2d 360), and again held valid by said Court (*William T. Graham and Graham-Hoeme Plow Co., Inc.*, v. *Cockshutt Farm Equipment, Inc.*, 256 F.2d 358).

8. Defendant, John Deere Company of Kansas City, in wilful infringement of said Letters Patent No. 2,627,798, has manufactured, sold and used apparatus embodying the inventions disclosed and claimed in said Letters Patent No. 2,627,798 and will continue to manufacture, sell and use said apparatus unless enjoined by this Court.

9. That said acts of infringement have been committed within the past six years and have been and are now being committed in Kansas City, Jackson County, Missouri, within the Western District, Western Division, of Missouri, and elsewhere in the United States of America.

10. Defendant has had notice of Plaintiffs' said Letters Patent No. 2,627,798, and Defendant has continued to manufacture, sell and use said apparatus embodying the inventions disclosed and claimed in said Letters Patent in infringement thereof.

WHEREFORE, Plaintiffs demand a preliminary and final injunction against further infringement by Defendant, and those affiliated with or controlled by Defendant; an accounting for profits and damages; that the amount of such damages be increased to a sum not exceeding three times the amount of such damages; an assessment of costs and attorney's fees against Defendant, and for such other and further relief as the Court may deed equitable and just.

Fishburn and Gold
1217 Commerce Trust Building
Kansas City 6, Missouri
By /s/ Claude A. Fishburn
/s/ Orville O. Gold

DATED this 24th day of September, 1959

DEFENDANT'S SECOND AMENDED ANSWER
(Filed December 21, 1961)

Defendant, JOHN DEERE COMPANY OF KANSAS CITY, with leave of Court, files this its Second Amended Answer in response to Plaintiffs' Original Complaint, respectfully alleging as follows:

1. The allegations of paragraph 1 of the Complaint are admitted, but Defendant denies that it has infringed the patent in suit.

2. The allegations of paragraph 2 are admitted.

3. The allegations of paragraph 3 are admitted.

4. Answering paragraph 4 Defendant admits that U. S. Patent No. 2,627,798 was issued on February 10, 1953, to Plaintiff, William T. Graham, and that he is the owner thereof. All other allegations of paragraph 4 are denied.

7. The cases cited in paragraph 7 of the Complaint speak for themselves, but the allegations of said paragraph are admitted, except that it is denied that the issue of validity was litigated or decided in *Jeoffroy Mfg.* v. *Graham,* 256 F.2d 360. Defendant would further show the Court that in *Graham* v. *Cockshutt,* 256 F.2d 358, the Court held that the patent was not infringed. Regardless

of what the holdings were in said cases, they are in no way binding upon this Defendant in this cause.

8. The allegations of paragraph 8 are denied.

9. The allegations of paragraph 9 are denied.

10. The allegations of paragraph 10 are denied. Defendant further says that it was first notified of Plaintiffs' charge of infringement when it was served with summons in this cause.

Additional Defenses

By way of further defense Defendant alleges as follows:

11. Patent No. 2,627,798 is invalid and void for lack of novelty and invention.

12. Said patent is invalid and void because the invention, if any, therein disclosed and claimed, or its equivalent, was known or used by others in this country before the alleged invention thereof by the applicant, William T. Graham. Persons having such knowledge or making such use were, among others, Glencoe Manufacturing Co., Glencoe, Minnesota, its employees, Elmer A. Rolf and Howard A. Hoefer, Glencoe, Minnesota, and its customers.

13. Said patent is invalid and void because the invention, if any, therein disclosed and claimed, or its equivalent, was in public use or on sale in this country more than one year prior to the date of the application for such patent in the United States. Persons making such public use or sale were Glencoe Manufacturing Co., Glencoe, Minnesota, its employees and its customers.

14. Said patent is invalid and void because the invention, if any, disclosed and claimed therein, or its equivalent, was made in this country by another person or persons who had not abandoned, suppressed, or concealed it, such other persons being Elmer A. Rolf and/or Howard A. Hoefer, Glencoe, Minnesota, employees of Glencoe Manufacturing Co.

15. Said patent is invalid and void because the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention,

if any, was made to a person having ordinary skill in the art to which said subject matter pertains.

Defendant cites the following patents and devices as showing the state of the prior art:

United States Letters Patent

Patent	Date of Issue	Patentee
211,003	Dec. 17, 1878	Dunbar
231,268	Aug. 17, 1880	Carter
284,278	Sept. 4, 1883	Cobb
287,965	Nov. 6, 1883	Rix
417,775	Dec. 24, 1889	Drader, et al.
503,288	Aug. 15, 1893	Moore
1,141,804	June 1, 1915	Lamprell et al.
1,805,599	May 29, 1931	Roberts
1,982,862	Dec. 4, 1934	Erdman
2,029,249	Jan. 28, 1936	Nell, et al.
2,493,811	Jan. 10, 1950	Graham

Foreign Patents

Australian

1,056	March 19, 1926	Prior
111,910	Nov. 8, 1940	Traeger

Danish

57,391	Mar. 18, 1940	Petersen

Prior Devices

A spring clamp devised, manufactured and marketed by Jeoffroy Mfg., Inc., Amarillo, Texas, as early as January 1949, such clamp being known as the Jeoffroy SC-580 spring clamp.

A spring clamp devised, manufactured and sold by Glencoe Manufacturing Co., Glencoe, Minnesota, said clamp having been made and tested as early as August 1949, offered for sale as early as March 1950, and actually sold and delivered as early as May 1950.

16. By reason of the proceedings in the United States Patent Office in the prosecution of the application for

Patent No. 2,627,798 Plaintiffs are estopped from maintaining the claims of such patent in such scope as to cover or embrace any device manufactured, used or sold by Defendant.

WHEREFORE, Defendant prays that all relief sought by Plaintiffs be denied, that the Complaint be dismissed, and that Defendant be discharged from all liability and recover its costs and such other relief to which it may be entitled.

FIRST AMENDED COUNTERCLAIM

For its First Amended Counterclaim against Plaintiffs, the Defendant, JOHN DEERE COMPANY OF KANSAS CITY, alleges as follows:

1. This counterclaim involves an action for declaratory judgment and for further relief in a case of actual controversy involving the validity and alleged infringement of United States Letters Patent No. 2,627,798 and jurisdiction of this Court arises under 28 U. S. C. §2201 and also under the Patent Laws of the United States.

2. Defendant, JOHN DEERE COMPANY OF KANSAS CITY, is a corporation of the State of Missouri, having a principal place of business at Kansas City, Missouri, within the Western District, Western Division of Missouri.

3. Plaintiff, WILLIAM T. GRAHAM, represents that he is a citizen of the United States and a resident of Amarillo, County of Potter, State of Texas and that he is the owner of United States Letters Patent No. 2,627,798. Plaintiff, Graham Plow, Inc., represents that it is a private corporation and duly organized under the laws of the State of Texas, with a principal place of business at Amarillo, County of Potter, State of Texas and that it has been duly authorized by Plaintiff, William T. Graham, to manufacture, use and sell devices embodying the inventions disclosed and claimed in said Letters Patent No. 2,627,798.

4. Defendant avers that said United States Letters Patent No. 2,627,798 are invalid and void and without any force and effect and are not infringed by Defendant for the reasons set forth in paragraphs 11 through 16 of Defendant's foregoing Second Amended Answer, and Defendant

reavers and reaffirms the averments of said paragraphs as if herein fully set forth.

5. Defendant avers that Plaintiffs have asserted and are now asserting in this action that said United States Letters Patent No. 2,627,798 have been and are now being infringed by this Defendant and Defendant denies that it has infringed said patent. An actual controversy therefore exists between Plaintiffs and Defendant.

WHEREFORE, Defendant prays:

1. That the Court declare that said United States Letters Patent No. 2,627,798 are invalid and void and without any force or effect.

2. That the Court declare that Defendant has not infringed in any way upon the aforesaid United States Letters Patent No. 2,627,798.

3. That Defendant have judgment for its costs in this suit and such other and further relief as may be proper.

Gibson, Ochsner, Harlan, Kinney & Morris
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Amarillo, Texas

By /s/ S. Tom Morris
Of Counsel

Scofield, Kokjer, Scofield & Lowe
1325 Rialto Building
Kansas City, Missouri

By /s/ Thos. E. Scofield
Of Counsel
Attorneys for Defendant

PLAINTIFFS' REPLY TO DEFENDANT'S FIRST AMENDED COUNTER CLAIM IN ITS SECOND AMENDED ANSWER

(Filed December 27, 1961)

Plaintiffs for their reply to Defendant's Counterclaim state as follows:

1. In reply to paragraph 1 of Defendant's Counterclaim, Plaintiffs state that the question of validity and infringement of the Letters Patent in suit No. 2,627,798 is the issue under the Complaint and Second Amended Answer and it is immaterial whether or not an action for a declaratory judgment is involved.

2. Plaintiffs admit the allegations of paragraphs 2, 3 and 5 of Defendant's First Amended Counterclaim.

3. Plaintiffs deny the allegations of paragraph 4 of Defendant's First Amended Counterclaim and state that said Letters Patent No. 2,627,798 are valid and have been and are being infringed by Defendant.

WHEREFORE, the Plaintiffs deny that Defendant is entitled to the relief prayed for in the Defendant's First Amended Counterclaim or to any relief whatsoever, and pray that Defendant's First Amended Counterclaim be dismissed and that Plaintiffs be granted in all respects the relief prayed for in the prayer of their complaint herein.

Fishburn and Gold

By /s/ Claude A. Fishburn

Attorneys for Plaintiffs

December 26, 1961

INTERROGATORIES UNDER RULE 33 OF THE FEDERAL RULES OF CIVIL PROCEDURE

(Filed December 4, 1959)

Now come the plaintiffs in the above-entitled cause and propound the following interrogatories to the defendant, John Deere Company of Kansas City, under Rule 33 of the Federal Rules of Civil Procedure, to be answered by an officer of the defendant having knowledge of the facts:

* * *

Interrogatory No. 2

State which of said patents and printed publications, if any, listed in paragraph 11 of the Amended Answer herein, discloses a mounting as set forth in Interrogatory

No. 1 having all of the following parts listed in the left-hand column herein below, such parts being capable of the corresponding functions listed in the right-hand column herein below:

PARTS	FUNCTION
(1) A fixed member (or bracket)	(1) which is fixed to the transverse member of the frame and terminates forwardly of the transverse member or beam of the plow whereby the shank of the ground working tool may be secured to the fixed member.
(2) Ears	(2) on the fixed member having openings for attaching a plate (shank attaching member.)
(3) A shank attaching member between the shank and the fixed member for attaching the shank to the fixed member	(3) having an elongated plate portion provided with an upper face and having a longitudinally extending underface in engagement with the corresponding upper face of the shank.
(4) Connecting means	(4) for connecting the plate portion of the shank attaching member to the shank for maintaining the upper face of the shank in contact with the underface of the plate portion of the shank attaching member.
(5) A pin	(5) extending transversely through the shank attaching member and engaging in the ears of the fixed member for pivotally connecting the shank attaching member to

	the fixed member whereon the shank attaching member pivots upon rocking movement of the shank.
(6) A coil spring	(6) having one end seated on the forward end of the fixed member and extending upwardly therefrom.
(7) Connecting means	(7) for connecting the forward end of the shank with the upper end of the coil spring so that the spring will exert pressure on and yieldably maintain the plate or shank attaching member in contact with the fixed member to maintain the normal plowing depth of the ground working tool.

* * *

Interrogatory No. 31

State whether or not there is any flexing of the shank (spring cultivator tooth) in defendant's accused device during a plowing operation.

Interrogatory No. 32

State what portion of the length of the shank will flex during a plowing operation.

Interrogatory No. 33

State what portion of the length of the shank will not flex during a plowing operation.

* * *

Interrogatory No. 38

State whether or not the alleged Glencoe prior use device included a mounting (spring clamp) as set out in Inter-

rogatory No. 37 and embodied the following parts and performed the functions set forth herein below:

PARTS	FUNCTION
(1) A fixed member (or bracket)	(1) which is fixed to the transverse member of the frame and terminates forwardly of the transverse member or beam of the plow whereby the shank of the ground working tool may be secured to the fixed member.
(2) Ears	(2) on the fixed member having openings for attaching a plate (shank attaching member).
(3) A shank attaching member between the shank and the fixed member for attaching the shank to the fixed member	(3) having an elongated plate portion provided with an upper face and having a longitudinally extending underface in engagement with the corresponding upper face of the shank.
(4) Connecting means	(4) for connecting the plate portion of the shank attaching member to the shank for maintaining the upper face of the shank in contact with the underface of the plate portion of the shank attaching member.
(5) A pin	(5) extending transversely through the shank attaching member and engaging in the ears of the fixed member for pivotally connecting the shank attaching member to the fixed member whereon the shank attaching member pivots upon rocking movement of the shank.

(6) A coil spring	(6) having one end seated on the forward end of the fixed member and extending upwardly therefrom.
(7) Connecting means	(7) for connecting the forward end of the shank with the upper end of the coil spring so that the spring will exert pressure on and yieldably maintain the plate or shank attaching member in contact with the fixed member to maintain the normal plowing depth of the ground working tool.

* * *

Fishburn and Gold

By: /s/ Claude A. Fishburn

DATED December 4, 1959

DEFENDANT'S OBJECTIONS TO CERTAIN OF PLAINTIFFS' INTERROGATORIES

(Filed January 11, 1960)

* * *

Interrogatories Nos. 31 to 33

Defendant objects to Plaintiffs' Interrogatories 31 to 33 inclusive, on the grounds that they are not relevant to the subject matter of the action. These interrogatories ask for information as to the flexing of the shank in defendant's accused device. There is nothing in the patent in suit, neither in the claims or in the specification, about flexing of the shank of the device of the patent in suit.

/s/ Thos. E. Scofield

Attorney for Defendant

MEMORANDUM AND ORDER ON DEFENDANT'S OBJECTIONS TO CERTAIN OF PLAINTIFFS' INTERROGATORIES

(Filed March 1, 1960)

* * *

Defendant's Objections to Interrogatories 31, 32 and 33 are sustained. These interrogatories relate to a flexing of the shank of the accused device, and appear irrelevant since such a flexing is not a claim of the patent in suit and Plaintiffs do not undertake to otherwise demonstrate the relevancy of such inquiry.

* * *

/s/ Albert A. Ridge
Judge

Dated at Kansas City, Missouri, this 1st day of March, 1960.

DEFENDANT'S ANSWERS TO CERTAIN OF PLAINTIFFS' INTERROGATORIES

(Filed March 31, 1960)

* * *

Answer to Interrogatory No. 2

No single one of the patents and printed publications listed in the aforesaid paragraph 11 of the Amended Answer, standing alone, discloses the specific subject matter of Interrogatory No. 2.

* * *

Answer to Interrogatory No. 38

In answer to Interrogatory No. 38, the Glencoe prior use device does not embody the particular structure and relation of parts as expressed in the specific language of Interrogatory No. 38.

* * *

/s/ C. R. Carlson, Jr.
Vice President, John Deere
Company of Kansas City

STATE OF ILLINOIS)
) ss
COUNTY OF ROCK ISLAND)

C. R. CARLSON, JR., having been duly sworn on oath deposes and says that he is Vice President of John Deere Company of Kansas City, defendant in the above action, that he has read the foregoing answers and that to the best of his knowledge, information and belief they are true and correct.

/s/ C. R. Carlson, Jr.

SUBSCRIBED AND SWORN TO BEFORE ME this 29th day of March, 1960.

/s/ Mary E. Denkhoff
Notary Public

STIPULATION

(Filed May 2, 1962)

The parties by their attorneys hereby stipulate as follows:

1. William T. Graham is the owner of United States Patent No. 2,627,798, the patent here in suit.

2. Graham Plow, Inc., is a licensee under said patent, the terms of its license being as shown by the minutes of Graham Plow, Inc., and its corporate predecessors, copies of which minutes are identified as Plaintiffs' Exhibits B (letter June 1, 1946, granting corporation use of Graham patents), B-1 through B-10, for the years 1946, 1948, 1949, 1950, 1953, 1958, and 1959, respectively.

3. Spring clamps in accordance with United States Patent No. 2,627,798 have never been manufactured or sold by William T. Graham, Graham Plow, Inc., or its corporate predecessors.

4. A spring clamp manufactured and sold by Jeoffroy Mfg., Inc., known as the Jeoffroy HT-5 spring clamp, one of which clamps is identified as Plaintiffs' Exhibit C, was commercially successful. Said clamp was held to infringe United States Patent No. 2,627,798 in *Jeoffroy Mfg., Inc.*, v. *Graham*, 219 F.2d 511 (5th Cir., 1955).

5. Jeoffroy Mfg., Inc., was held in contempt in the case of *Jeoffroy Mfg., Inc.*, v. *Graham*, (5th Cir.) 256 F.2d 360, by reason of manufacture and sale of spring clamps in violation of the Court's decree and order in which United States Patent No. 2,627,798 was held valid and infringed by the Jeoffroy HT-5 spring clamp (Plt. Ex. C). Among the spring clamps held in contempt were the Jeoffroy HT-5-A, one of which clamps is identified as Plaintiffs' Exhibit D, and the Jeoffroy HT-6-AD, one of which clamps is identified as Plaintiffs' Exhibit E.

6. Rose Proctor, an employee of Graham Plow, Inc., if called as a witness, would testify that the first drawing of the Graham 798 structure, a copy of which drawing is identified as Plaintiffs' Exhibit F, was made by her at the direction of and pursuant to the instructions of William T. Graham, and that said drawing was completed on March 19, 1950, that further drawings, identified as Plaintiffs' Exhibits G and H were made by her at the direction of and pursuant to the instructions of William T. Graham and were completed respectively on May 16, 1951 and May 19, 1951.

7. All of the prior patents and prior devices cited and relied upon by Defendant herein, except the Rix Patent No. 287,965, the Roberts Patent No. 1,805,599 and the Glencoe clamp, were before the District Court and the Appellate Court in *Jeoffroy Mfg., Inc.*, v. *Graham*, 219 F.2d 511 (5th Cir., 1955), wherein Patent No. 2,627,798 was held to be valid and infringed, and all of the prior art herein cited and relied upon by Defendant was before the District and Appellate Courts in *Graham* v. *Cockshutt*, 256 F.2d 358 (5th Cir., 1958), wherein Patent No. 2,627,798 was held valid but not infringed by the Cockshutt spring clamp there in issue, one of which spring clamps is identified as Defendant's Exhibit No. 1.

8. The John Deere 650 spring clamp, one of which is identified as Plaintiffs' Exhibit I, and the John Deere 100 spring clamp, one of which is identified as Plaintiffs' Exhibit J, have been sold by Defendant, JOHN DEERE COMPANY OF KANSAS CITY, and both of said spring clamps are in issue in this suit. Plaintiffs charge that the John Deere 650 spring clamp infringes claim 1 of Patent No.

2,627,798 and that the John Deere 100 spring clamp infringes both claims 1 and 2 of Patent No. 2,627,798.

9. The Jeoffroy SC-580 spring clamp, one of which is identified as Defendant's Exhibit No. 2, was manufactured and sold in substantial quantities by Jeoffroy Mfg., Inc., as early as January, 1949.

10. Glencoe Manufacturing Co., Glencoe, Minnesota, first made and tested a spring clamp as early as August, 1949, at which time it was exhibited to the public and photographed. Commercial manufacture of such clamp was commenced as early as December, 1949, and said clamp was offered for sale and actual orders were taken as early as March 14, 1950. It was advertised for sale in a printed publication in the United States in April, 1950. Actual sale and delivery thereof was made as early as May 22, 1950, and other sales were made prior to August 27, 1950. The Glencoe device is exemplified by Defendant's Exhibit No. 3.

Dated May 1, 1962.

Fishburn and Gold
Attorneys for Plaintiffs
/s/ Claude A. Fishburn
By /s/ Orville O. Gold
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris
Attorneys for Defendant
By /s/ S. Tom Morris
Of Counsel

STIPULATION
(Filed May 11, 1962)

It is stipulated by and between the parties to the above-entitled cause that Deere & Company, a Delaware corporation, voluntarily appears as a party Defendant in this action and subjects itself to the jurisdiction of this Court;

That Plaintiffs' pleading shall apply to Deere & Company the same as John Deere Company of Kansas City, and that

Deere & Company as a party Defendant in this suit adopts the answer and other pleadings of the Defendant, John Deere of Kansas City, and otherwise subjects itself to the pleadings in this case, the same as if it had been joined as a party at the beginning of this action.

Fishburn and Gold
/s/ Orville O. Gold
/s/ Claude A. Fishburn
Attorneys for Plaintiffs
/s/ Thos. E. Scofield
/s/ S. Tom Morris
Attorneys for Defendants

May 2, 1962

AMENDED MEMORANDUM OPINION, FINDINGS OF FACT, AND CONCLUSIONS OF LAW

(Filed March 18, 1963)

On February 8, 1963, this Court entered its Memorandum Opinion, Findings of Fact, and Conclusions of Law in this cause. At that time the parties were granted ten days in which to suggest any proposed changes or modifications in the said opinion and findings. The suggested changes and modifications were duly filed by both parties, and duly considered by the Court, and certain changes and modifications were considered necessary by the Court. Therefore, the Memorandum Opinion, Findings of Fact, and Conclusions of Law entered herein on February 8, 1963, are hereby set aside and the following Amended Memorandum Opinion, Findings of Fact, and Conclusions of Law are entered in their place:

This is an action for infringement of United States Letters Patent Number 2,627,798, which was issued to plaintiff William T. Graham on February 10, 1953. The patent was issued for a "Clamp for Vibrating Shank Plows," and will hereinafter be referred to as the "798" patent. Plaintiffs seek a permanent injunction, an accounting, and damages. Defendants contend that the 798 patent was

void or invalid because of lack of novelty or invention, because of anticipation, because of a prior use more than one year prior to the date of the application for such patent, and further because the subject matter of the patent would have been obvious to a person of ordinary skill in the art due to the status of the prior art. Defendants also assert the claim of "file wrapper estoppel," that is, that because of certain proceedings in the patent office during the processing of the 798 patent, plaintiffs are estopped to assert infringement by defendants. Defendants also contend that, if the patent is valid, it has not been infringed and defendants have filed a counterclaim seeking a declaratory judgment to the effect that the 798 patent is void and invalid.

Defendants rely on the prior patents and devices as showing the state of the prior art as follows:

United States Patent

Patent	Date of Issue	Patentee
211,003	Dec. 17, 1878	Dunbar
231,268	Aug. 17, 1880	Carter
284,278	Sept. 4, 1883	Cobb
287,965	Nov. 6, 1883	Rix
417,775	Dec. 24, 1889	Drader, et al.
503,288	Aug. 15, 1893	Moore
1,141,804	June 1, 1915	Lamprell, et al.
1,805,599	May 19, 1931	Roberts
1,982,862	Dec. 4, 1934	Erdman
2,029,249	Jan. 28, 1936	Noell, et al.
2,493,811	Jan. 10, 1950	Graham (Plaintiff)

Foreign Patents

Australian

1,056	Mar. 19, 1926	Prior
111,910	Nov. 8, 1940	Traeger

Danish

57,391	Mar. 18, 1940	Petersen

Prior Devices

1. A spring clamp devised, manufactured and marketed by Jeoffroy Mfg., Inc., Amarillo, Texas, as early as January 1948, such clamp being known as the Jeoffroy SC-580 spring clamp.

2. A spring clamp devised, manufactured and sold by Glencoe Manufacturing Co., Glencoe, Minnesota, said clamp having been made and tested as early as August 1949, offered for sale as early as March 1950, and actually sold and delivered as early as May 1950.

United States Letters Patent Number 2,493,811 was issued to plaintiff Graham for a previous similar device, and this patent will be referred to frequently in this opinion, although it is not directly in issue here. It will be referred to simply as the "811" Patent.

The 798 Patent has been the subject of litigation on several previous occasions. In *Jeoffroy Mfg. Co., Inc.*, v. *Graham,* 219 F.2d 511, the 798 Patent was held valid and infringed by the United States Court of Appeals for the 5th Circuit, reversing the decision of the trial court that the patent was invalid. In *Jeoffroy Mfg. Co., Inc.*, v. *Graham,* 256 F.2d 360, the 5th Circuit again held the 798 Patent infringed, affirming the findings of the trial court. And in *Graham* v. *Cockshutt Farm Equipment, Inc.*, 256 F.2d 358, the 5th Circuit again found the 798 Patent valid, but not infringed, affirming the findings of the trial court.

It appears by stipulation that all of the prior patents and prior devices cited and relied upon by the defendants in the case at bar, except the Rix Patent Number 287,965, the Roberts Patent Number 1,805,599, and the Glencoe clamp device, were before the District Court and the Appellate Court in the first *Jeoffroy* case and all the prior art relied upon by defendants in the case at bar was before the District and Appellate Courts in the *Cockshutt* case.

The record shows that, of the prior patents and devices cited and relied upon by defendants in the case at bar, only the following patents were of record in the Patent Office proceedings on the 798 Patent:

United States Patents

417,775	Dec. 24, 1889	Drader, et al.
2,014,451	Sept. 17, 1935	Pfeifer
2,493,811	Jan. 10, 1950	Graham

Danish Patent

57,391	Mar. 18, 1940	Petersen

Australian Patent

111,910	Nov. 8, 1940	Traeger

None of the other patents relied on by defendants are of record in the Patent Office file with reference to the 798 Patent, nor are any prior devices on record in the Patent Office file. It should be noted that the United States Pfeifer patent, although of record in the Patent Office file, has not been cited by defendants in this case.

The Patent Office file wrapper in the 798 Patent discloses that Graham originally submitted his application with twelve claims. These claims were all rejected by the Patent Office, partially on the grounds that some of the claims failed to patentably distinguish from the 811 Patent, and partially on the grounds of lack of invention. Claims 13 and 14, which eventually issued as claims 1 and 2 of the 798 Patent, were then submitted by Graham to be substituted for the original twelve claims. These two claims, as finally issued, are as follows:

"1. In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the frame when the plow is in operation in a forward direction, a mounting for pivotally attaching and supporting the shank of the ground working tool to a transverse member of the frame, the mounting including a fixed member adapted to be fixed to the transverse member of the frame and having a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed, the fixed member having ears extending rearwardly from said underface at the sides thereof, a shank attaching member having an elongated plate portion provided

with an upper face corresponding with and normally in contact with said underface of the fixed member and provided with a longitudinally extending underface in engagement with a corresponding upper face of the shank whereby the plate portion of the shank attaching member is between the shank and the fixed member, means connecting the elongated plate portion with the shank for maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion of the shank attaching member, a transverse pin pivotally connecting the shank attaching member to the fixed member at the rear ends of said normally contacting faces and whereon the shank attaching member pivots upon rocking movement of the shank, a coil spring having one end seated on the forward end of the fixed member, and means having connection with the forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member to maintain the normal plowing depth of the ground working tool.

"2. In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the frame when the plow is in operation in a forward direction, a mounting for pivotally attaching and supporting the shank of the ground working tool to a transverse member of the frame, the mounting including a fixed member adapted to be fixed to the transverse member of the frame and having a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed, the fixed member having ears extending rearwardly from said underface at the sides thereof, a shank attaching member having an elongated plate portion provided with an upper face corresponding with and normally in contact with said underface of the fixed member and provided with a longitudinally extending underface in engagement with a corresponding upper face of the shank whereby the plate portion of the shank attaching member is between the shank and the fixed member, said shank attaching member having a lug extending up-

wardly between said ears of the fixed member and disposed at the rear end of the plate portion and above the plane of the underface of the fixed member, said shank attaching member having depending means embracing the shank at the rear end of said plate portion, a bolt connecting the forward end of the plate portion with the forward end of the shank and cooperating with the shank embracing means in maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion, a pivot pin extending transversely through said lug and carried by the ears with the axis thereof above the plane of the underface of the fixed member whereby the normally contacting face of the shank attaching member immediately moves out of contact with and away from the face of the fixed member when the shank attaching member pivots upon rocking movement of the shank, a coil spring having one end seated on the forward end of the fixed member, and means having connection with the forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member."

There are actually two devices of defendants involved in this action. One is the "Deere 650" model, which plaintiffs contend infringes upon Claim One of the 798 Patent, and the other is the "Deere 100" model, which plaintiffs claim infringes upon both Claims one and Two of the 798 Patent.

The above-entitled cause came on regularly for trial and the Court having duly considered the evidence and being fully advised in the premises now finds the following:

FINDINGS OF FACT

I.

The plaintiff, William T. Graham, resides at Amarillo, Texas, and is a citizen of the United States. The plaintiff, Graham Plow, Inc., is a corporation organized under the laws of the state of Texas, with a principal place of business at Amarillo, Texas. The defendant, John Deere Company of Kansas City, is a corporation organized under the

laws of the state of Missouri, with a place of business at Kansas City, Missouri. The defendant, Deere & Company, is a corporation organized under the laws of the state of Delaware, with a principal place of business in Moline, Illinois.

II.

On February 10, 1953, Letters Patent No. 2,627,798 was issued to William T. Graham on an application filed August 27, 1951, for an invention on "Clamp for Vibrating Shank Plows." William T. Graham is the owner of said patent, and Graham Plow, Inc., is a licensee under said Letters Patent.

III.

This is a suit under the Patent Laws of the United States for infringement of U. S. Letters Patent No. 2,627,798, and this Court has jurisdiction of the parties and the subject matter of this suit.

IV.

In the description and drawings of the Graham patent in suit, there is disclosed what is called a "spring clamp" to connect the upper forward end of a resilient shank to a beam with the lower end of said shank carrying a ground-working tool such as a chisel and the like for plowing or other ground-working operations. The clamp includes a body portion removably attached to the beam with a rearward portion having a pivot pin on which is pivotally mounted a movable part with a plate portion extending forwardly or longitudinally of the normal direction of travel of the plow. The upper forward portion of the shank extends through a stirrup or loop element at the rear of the movable part and longitudinally beneath the plate portion of the movable part and is connected to the plate at the forward end thereof at a substantial distance from the pivot pin, whereby the shank and movable part pivot together about the axis of the pivot pin. A coil spring is arranged at the forward end of the body and, through a nut, washer and spring rod, acts on the shank and plate member to resiliently urge the forward end of

the shank and plate upwardly toward the body of the clamp to a stop engagement therewith to normally hold the shank in normal position. In plowing operations, forces are exerted rearwardly and upwardly on the ground-working tool, and when sufficient to overcome the forces applied by the spring the shank and movable part will pivot on the pivot pin with the forward end of the shank and plate moving downwardly against the tension of the spring. Forces in plowing hold the shank against the rear of the plate of the movable part and when said forces are removed or lessened, or the ground-working tool removed from the ground, the shank at the rear of the movable part is supported by a stirrup or loop that embraces the shank adjacent the pivot of the movable part. In plowing operations, if the ground-working tool strikes a rock or other obstruction, substantial shock and forces are applied to the shank, pivoting the shank and movable member about the pivot pin, tending to compress the spring and permitting upward movement of the ground-working tool whereby it can pass over the rock or obstruction and, as it passes over such obstruction, the stirrup or loop on the movable part supports the shank against excessive rebound. While the stirrup supports the shank at the rear of the movable part, it does so in a manner that permits movement of the shank, thereby retaining the flexibility of the structure and reducing shock.

V.

Prior to the invention in the Graham patent in suit, Graham Plow, Inc.'s predecessor manufactured and sold chisel plows wherein the upper forward portion of the shank was rigidly fixed to the plow beam by a rigid clamp. Said plaintiff corporation's predecessors started selling such chisel plows in the rocky country, but the chisels in striking rocks caused such shocks to be imparted to the equipment that the parts of the plows were bent and broken so that the structures were not satisfactory. In endeavoring to overcome the problems of plowing in the rocky country, Graham devised a spring clamp structure, and on January 10, 1950, was issued Patent No. 2,493,811 entitled "Vibrating Plow and Mounting There-

for," which was prior to the Graham patent in suit. Plaintiff, Graham Plow, Inc., has continued to manufacture and sell plows with spring clamps which embody the principle of the structure of the 811 patent, but neither William T. Graham, the Graham companies, nor any licensee under them has ever manufactured or sold a clamp embodying the 798 structure.

VI.

Prior to defendants putting their John Deere 650 series spring clamp on the market, their only product having a support with any spring action for chisels in plowing was a type having a coil in the shank used on both their 600 and 900 series tools, such shanks having coils of approximately two turns intermediate the ends and rearwardly of the frame. Early in 1953, defendants sent a representative in the field to make a survey to determine if the 600 tool carrier was the right design to compete with Graham and Jeoffroy, the survey reports being defendants' Exhibits 30 dated March 30, 1953, and 31 dated April 17, 1953. Defendants' engineer, Mr. Hunter, who designed the John Deere 650 spring clamp had previously made trips into the field and had seen Graham's spring clamp plows of the 811 type and Jeoffroy's spring clamp plows. It was defendants' practice to obtain copies of patents on farm implements and maintain a library of such copies for the engineers in the factory and also in the defendants' Patent Department, so that when Mr. Hunter was given the assignment of designing a new tillage tool clamp in the spring of 1953, the Graham patent in suit and both of the survey reports (def. Exs. 30 and 31) were available to him. Mr. Hunter designed a clamp and two drawings thereof (defs. Exs. 33-A and 33-B) were sent to the Patent Department of Deere & Company, and said Patent Department, by letter of October 23, 1953 (def. Ex. 32) advised that the proposed spring clamp design infringed claim 1 of the Graham 798 Patent. In that structure, an upper face of the plate of the movable member engaged a lower face of the body or member fixed to the beam, but in a revised design shown in drawings (defs. Exs. 38 and 39), the forward end of the plate was cut off to ex-

pose the extreme forward end of the shank and a lug on the body was extended down to engage the upper face of the shank when said shank was in normal position. The revised design with minor changes became the defendants' commercial device, the John Deere 650 spring clamp (plt. Ex. I), but that structure had the same plowing action as the structure shown in the design (def. Ex. 33-B).

VII.

In 1958, Mr. Hunter was given the project of developing a lighter machine, which project ended in the placing of the John Deere 100 series spring clamp on the market. Mr. Hunter made a preliminary design, drawings of which (def. Exs. 45-A and 45-B) were sent to the Deere Patent Department, which, by letter dated May 7, 1958 (def. Ex. 32) advised that such design would be an infringment of claim 1 of the Graham 798 patent. The preliminary design had a forward end of the pivoted member engaging a forward portion of the body of the fixed member to form a stop when the springs held the pivoted member and shank in normal position. The preliminary design was revised by removal of material on the forward end of the pivoted member and adding some material to the plate portion under the beam which was exposed between body parts secured on the beam so that the plate portion would contact the beam to form the stop when the pivoted member and shank were in normal position, but this change did not change the function or positioning of the shank.

VIII.

The following patents were made of record during the prosecution of the application for the Graham Patent in suit:

417,775	Drader et al.
2,014,451	Pfeifer
2,493,811	Graham
57,391	Petersen (Danish)
111,910	Traeger (Australian)

These patents are relied upon by defendants as part of the prior art in this case.

IX.

Defendants have also cited by way of defense, in addition to the file wrapper patents, the following patents:

211,003	Dunbar
231,268	Carter
284,278	Cobb
287,965	Rix
503,288	Moore
1,141,804	Lamprell et al.
1,805,599	Roberts
1,982,862	Erdman
2,029,249	Noell et al.
1056/26	Prior (Australian)

X.

Defendants have also cited by way of defense the following prior devices:

Jeoffroy SC-580 spring clamp (def. Ex. 2) manufactured and marketed by Jeoffroy Mfg. Inc., Amarillo, Texas;

Glencoe spring clamp (def. Ex. 3) manufactured and sold by the Glencoe Manufacturing Co., Glencoe, Minnesota.

XI.

Defendants place principal reliance upon the prior art patents to Cobb 284,278 and Rix 287,965 and the prior device of Glencoe, and contend that the usual presumption of validity does not apply because the Patent Office failed to consider these patents and device, as well as the other additionally cited prior art. All of the prior art cited by defendants was before the Court in the Fifth Circuit in *Graham* v. *Cockshutt,* wherein the decision, 256 F.2d 358, held the Graham patent valid, but not infringed. The disclosures of the prior art not cited by the Patent Office, and particularly the Cobb and Rix patents and the Glencoe device, are similar to some of the patents relied upon by the Patent Office Examiner, as for example the Danish patent of Petersen. Hence, the statutory presumption of validity of the Graham patent in suit is not weakened or destroyed.

XII.

The prior art as a whole in one form or another contains all of the mechanical elements of the Graham 798 structure, and in a broad sense all of the elements are found in one single reference, the Glencoe clamp. However, the particular arrangement of the elements disclosed by 798 is not present in any single reference or as a whole.

XIII.

An improved functional result is obtained by the Graham 798 structure and the main improvement is due to the particular arrangement of the shank in relation to the pivoted member and spring member which reflects in downward flexing of the shank at the forward portion thereof alongside the plate portion of the pivoted member and does lessen wear and tear to some parts of the clamp.

XIV.

The Glencoe structure uses a rotating pivot which prevents rubbing contact of the shank with the fixed member of the clamp and means for attaching the shank to the pivoted member which permits flexibility of the shank posteriorly to the rear of the pivoted member equal in magnitude to that which would be expected in the Graham 798 patent structure. However, the flexing of the shank is different in direction and location relative to the pivoted member than that which occurs in the Graham 798 structure. The Graham 798 patent is an improvement patent and, while the individual mechanical elements may be found in the prior art, taken as a whole the Graham 798 structure is sufficiently different in the operative relationship of the shank and pivoted member with a slight but significant difference in the flexing of the forward portion of the shank that is not found in the prior art, so that the Graham 798 patent involves invention.

XV.

The differences between the Graham 798 patent and the prior art are such that the Graham 798 structure, as covered by claims 1 and 2 thereof, would not have been obvious

at the time Graham made his invention to a person having ordinary skill in the art of agricultural implements and other related arts. It would not have been obvious to a man having ordinary skill in the art to have taken certain components of the prior art and to have combined them in the manner disclosed and claimed in the Graham patent. Even with the full benefit of hindsight, it cannot be said that the Graham structure represents no more than skilled craftsmanship.

XVI.

All of the evidence taken together establishes that defendants, with knowledge of the Graham 798 patent, made designs that infringed the Graham patent and then made minor changes which were differences in degree and not in fact in their commercial structures to provide substantially the same structure and operating substantially in the same manner and providing substantially the same results to actually employ the essence of the Graham invention.

XVII.

It demanded invention of the quality required by the Patent Statutes, Title 35, U.S.C., to produce the structure of the Graham 798 patent. Defendants have failed to sustain the burden imposed by §282, Title 35, U.S.C.

XVIII.

No evidence was introduced to show that defendants' structures were derived from the prior art, from independent experiment, or from any source other than the patented structure itself. In view of this, it is a fair inference that the accused structures had their origin in the Graham 798 patented structure.

XIX.

Defendants have contended that the accused John Deere 650 spring clamp avoids claim 1 of the Graham 798 patent because said accused structure does not have a longitudinally extending underface of the fixed member engaged by the upper face of the plate of the pivoted member. The

Court finds, however, that the fixed member does have an underface, that due to shortening of the plate of the pivoted member, is engaged by an upper face of the shank to provide the same result.

XX.

Defendants have contended that the accused John Deere 100 spring clamp avoids claims 1 and 2 of the Graham 798 patent because an upper face of the plate of the pivoted member engages an underface of the beam instead of the fixed member. The Court finds, however, that in actual use, the engaging faces are equivalent and provide the same result.

XXI.

Defendants assert the "doctrine of File Wrapper Estoppel," i.e., that in the prosecution of his patent within the Patent Office, Graham canceled certain rejected claims, accepted narrower claims in their stead, and is now estopped from obtaining a breadth of construction as broad as that contained in the claims voluntarily canceled. Defendants urge that in this case the patent claims require the stop contact faces of the devices must be the upper face of the plate of the movable member and a lower face of the fixed member and that such faces must have substantial longitudinal length. While claims 1 and 2 of the patent specify the faces as longitudinally extending, they do not specify any extent of longitudinal length, and the location of the faces forwardly of the pivot pin is different from the location of the beak adjacent the pivot pin in the Danish patent of Petersen. The original claims 1 to 12 inclusive in the Graham application as filed were broad in regard to the relative position of the shank and plate of the movable member, and the patent claims are narrower in that the shank is specified as being below the plate of the movable member. The relative location of the parts of the Graham 798 device as specified in the patented claims, when the operative conditions and forces are considered, is not shown in any of the prior art relied on by defendants. Therefore, the Court finds that there is no file wrapper estoppel to a construction of the claims that would

preclude a finding of infringement by the accused Deere structures.

XXII.

The defendants' John Deere 650 spring clamp has all of the elements or the equivalents thereof of claim 1 of the patented structure and performs the same function in the same way as the corresponding element of the patented structure. Defendants' said spring clamp responds to the equivalents of the elements of claim 1 of the Graham patent, and this claim has been infringed by defendants' manufacture and sale of the accused John Deere 650 clamp.

XXIII.

The defendants' John Deere 100 spring clamp has all of the elements or the equivalents thereof of claims 1 and 2 of the patented structure and performs the same function in the same way as the corresponding element of the patented structure. Defendants' said spring clamp responds to the equivalents of the elements of claims 1 and 2 of the Graham patent, and these claims have been infringed by defendants' manufacture and sale of the accused John Deere 100 spring clamp.

XXIV.

All changes or variations in design made by the defendants in its structures 650 and 100 apparently serve no purpose or introduce any different operating principle other than effecting a consciously patterned variation in an attempt to avoid infringement of the plaintiffs' 798 device. This does not necessarily mean that the defendants' actions were in bad faith, as they have a right to construct spring clamp plows so long as their devices do not infringe upon others' patents. But it appears that defendants have definitely used the basic structure and principle of the plaintiffs' patent 798 within the reasonable scope of the coverage of plaintiffs' patent.

XXV.

Defendant's contention on "longitudinally extending underface" as being an essential and restrictive description

of plaintiffs' 798 Patent, is too literal and narrow. Each design of the defendants which literally avoids this description performs exactly the same function and purpose with identical results.

CONCLUSIONS OF LAW

1.

The Court has jurisdiction over the subject matter of this action and the said parties.

2.

Claims 1 and 2 of the Graham patent No. 2,627,798 are valid.

3.

Claim 1 of the Graham patent No. 2,627,798 has been infringed by defendants' John Deere 650 spring clamp as exemplified by plaintiffs' Exhibit I.

4.

Claims 1 and 2 of the Graham patent No. 2,627,798 have been infringed by defendants' John Deere 100 spring clamp as exemplified by plaintiffs' Exhibit J.

5.

Defendants are jointly and severally liable for damages resulting from infringement of the Graham patent No. 2,627,798 and also for the costs in this action.

6.

Plaintiffs are entitled to a permanent injunction against the defendants in respect to claims 1 and 2 of said Graham patent No. 2,627,798 and to an accounting for compensatory damages, as well as any further recovery authorized by law and awarded in the discretion of the Court.

/s/ Floyd R. Gibson
Judge

Kansas City, Missouri,
March 11, 1963

JUDGMENT
(Filed March 25, 1963)

The above-entitled action having come on for trial as to the issue of liability before the Court without a jury; the parties having each offered testimony and other evidence, filed briefs and presented oral argument of counsel; and the Court having considered the matter and filed its Memorandum Opinion including findings of fact and conclusions of law:

It is hereby Ordered, Adjudged and Decreed that:

1. The Court has jurisdiction of the parties to and the subject matter of the action.

2. Plaintiff, William T. Graham, is the lawful owner of the entire right, title and interest in U. S. Letters Patent No. 2,627,798, except for a license under said patent granted to plaintiff, Graham Plow, Inc.

3. Claims 1 and 2 of U. S. Letters Patent No. 2,627,798 are each valid.

4. Claims 1 and 2 of U. S. Letters Patent No. 2,627,798 have each been infringed by defendants, John Deere of Kansas City, and Deere and Company.

5. Defendants, John Deere Company of Kansas City, and Deere and Company, their successors, officers, agents, attorneys, associates, employees, and all persons acting in conjunction with said defendants, are hereby enjoined from further infringement of either claims 1 or 2 of said U. S. Letters Patent No. 2,627,798, and in particular, from further using, making, or selling any Model 650 series, Model 100 series, or equivalent models of spring clamp plows manufactured by defendants, during the remaining term of said patent.

6. Plaintiffs shall have judgment against defendants for damages determined in accordance with Title 35, United States Code, §284, the amount of said damages to be hereafter determined upon further proceedings, for which purpose the Court retains jurisdiction.

7. On the counterclaim of defendants for declaratory judgment, the Court finds the issues in favor of the plaintiffs and against the defendants.

8. Plaintiffs shall have judgment for their costs in this action, to be hereafter taxed in accordance with Rule 54(c), Federal Rules of Civil Procedure.

Enter:

/s/ Floyd R. Gibson
Judge

March 25, 1963

MOTION FOR NEW TRIAL
(Filed April 3, 1963)

Pursuant to Rule 59 of the Federal Rules of Civil Procedure Defendants move the Court to set aside the Findings of Fact and Conclusions of Law entered on March 11, 1963, and the Judgment entered on March 25, 1963, and to grant a new trial upon the following grounds:

I.

The Court has erred in holding that Patent No. 2,627,798 is valid for the following reasons:

A. The Court has failed to give proper consideration and effect to the rule that the presumption of validity is weakened when pertinent prior art was not considered by the Patent Office and the Court's Finding No. XI that the presumption of validity of the 798 patent is not weakened by the fact that pertinent prior art was not considered by the Patent Office is clearly wrong.

B. The Court has applied an incorrect test of invention as shown by the following:

1. The established rule of the Supreme Court and of the Eighth Circuit Court is that a combination of old elements does not amount to invention unless the combination produces some new, surprising or unexpected result and that mere improvement of function, efficiency or economy is not enough.

2. The Court has found that the 798 structure is a combination of old elements. The Court has not found any new, surprising or unexpected result, but on the contrary

has found only an improved functional result and a reduction of wear to some parts of the clamp. Those findings do not meet the test and are insufficient to support a finding of invention.

C. The Court's finding of improved functional result reflected mainly in a downward flexing of the 798 shank in the forward portion thereof alongside the plate portion of the pivoted member (Finding No. XIII) and a significant difference in the flexing of the forward end of the shank (Finding No. XIV) are clearly wrong in that: (1) the undisputed evidence is that there was substantially similar flexing in the forward portion of the shank in the Graham 811, Jeoffroy SC-580 and Glencoe prior use devices, the only differences being a slight difference in distribution of the flex and a difference in direction relative to the plate portion of the pivoted member, and (2) the undisputed evidence is that the small amount of flex in the forward portion of the 798 shank is insignificant and unimportant to the function and operation of the device.

D. Such flexing in the forward end of the shank, even if it were significant, was not mentioned or claimed in the patent or the File Wrapper history and therefore does not support a finding of invention.

E. The Court's finding that the Graham 798 arrangement reduces wear and tear to some parts of the clamp (Finding No. XIII) is clearly wrong in that it disregards the Glencoe clamp and the evidence with respect thereto. It is conceded that the 798 arrangement would reduce wear and tear to some parts of the clamp as compared to the Graham 811 clamp, but the undisputed evidence is that the 798 clamp affects no improvement in that respect as compared to the Glencoe clamp.

F. The Court's Finding No. XV that the Graham 798 structure would not have been obvious to a person having ordinary skill in the art is clearly wrong in that: (1) there is no evidence to support such finding; (2) the evidence is insufficient to support such finding; and (3) such finding is contrary to the weight and preponderance of the evidence.

II.

The Court has erred in holding that the Deere 650 clamp infringes Claim 1 of the patent and in holding that the Deere 100 clamp infringes Claims 1 and 2 of the patent for the following reasons:

A. The Court has construed and applied the claims broadly rather than narrowly as required by the language of the claims, the context of the patent, the prior art and the File Wrapper history.

B. The Court's Findings XVI, XIX, XX, XXII, XXIII, XXIV and XXV to the effect that the Deere 650 clamp is the equivalent of Claim 1, that the Deere 100 clamp is the equivalent of Claims 1 and 2 and that both Deere clamps have used the basic structure, principle and essence of the Graham invention are clearly wrong in that: (1) there is no evidence to support such findings; (2) the evidence is wholly insufficient to support such findings; (3) such findings are clearly contrary to the weight and preponderance of the evidence, and (4) the Court has applied an incorrect test and range of equivalence.

C. The Court's Finding No. XXI that the doctrine of File Wrapper Estoppel does not limit the scope of the claims of the 798 patent so as to preclude their application to the Deere 650 and 100 clamps is clearly wrong in that: (1) there is no evidence to support such finding; (2) the evidence is insufficient to support such finding; (3) such finding is clearly against the weight and preponderance of the evidence, and (4) the Court has applied an incorrect rule of File Wrapper Estoppel.

D. If the 798 patent is valid and if, as the Court has found, a significant feature thereof is a flex in the forward portion of the shank downwardly from the plate portion of the pivoted member, then the Court's implied finding that the Deere 650 and 100 clamps so function is clearly wrong in that: (1) there is no evidence to support such finding; (2) the evidence is insufficient to support such finding; and (3) such finding is clearly contrary to the weight and preponderance of the evidence.

WHEREFORE, Defendants pray that this motion be sustained and that a new trial be granted.

Respectfully submitted,

Scofield, Kokjer, Scofield & Lowe
Gibson, Ochsner, Harlan, Kinney & Morris
Attorneys for Defendants

By: /s/ S. Tom Morris
Of Counsel

ORDER DENYING DEFENDANTS' MOTION FOR NEW TRIAL

(Filed June 26, 1963)

This is an action for patent infringement. The case has been tried, and on March 18, 1963, the Court filed its final Amended Memorandum Opinion, Findings of Fact, and Conclusions of Law, holding the patent in question valid and infringed. Judgment against defendants was entered on March 25, 1963. On April 5, 1963, judgment was stayed, pending disposition of defendants' motion for a new trial, which was filed on April 3, 1963. On June 4, 1963, a hearing of oral arguments was had on defendants' motion for a new trial.

Defendants' motion raises several points, most of which were covered to a large extent in the final opinion rendered in this case, and the Court will not dwell on these points. One point, however, will be treated here. This is the defense of "file wrapper estoppel" raised by defendant.

The patent application was originally filed in twelve claims. Admittedly, these claims were so broad that no patent could have been granted thereon, as they would probably have covered all similar devices operating on the same principle which had theretofore been invented or which thereafter might have been.

The claims were then amended by plaintiff to two much narrower claims. Defendants now assert that, plaintiff having narrowed his claims to secure the issuance of his

patent, he cannot now have the claims construed to give broad enough coverage so that defendants' devices may be interpreted as infringing.

The principle restrictive terms added to the amended claims refer mainly to the form and location of the parts of the plow and the physical form and appearance of the plow was not changed. The essence of defendants' contention is that the restrictions as to form and location which were added to the amended claims should be read literally, or nearly so, and that the doctrine of equivalents should not be applied to hold defendants' devices as infringing.

The defendants' devices do not literally read upon the claims in the patent. This is admitted by all parties. However, it is the opinion of the Court that defendants' devices do perform substantially the same function, using substantially the same means, in substantially the same manner, as the device described in plaintiffs' patent. In the opinion of the Court, the fact that one of defendants' devices uses a lug contacting the shank of the plow as a stop instead of a full longitudinal contact between the pivoted member and the fixed member is not enough of a distinction, when the doctrine of equivalents is applied, to take defendants' device out of the realm of infringement. Also, the fact that, in a second device of defendants', the fixed I beam of the frame takes the place of the longitudinally extended underface of the fixed member in acting as a stop, is not enough to escape infringement, under the doctrine of equivalents.

It is the opinion of the Court that it is not an improper extension of the doctrine of equivalents, as applied to the defense of file wrapper estoppel, to state that defendants' devices are functionally equivalent to that described in plaintiffs' patent. The basic functional parts of plaintiffs' device are all present in those of defendants, and the relative position and form of these parts are substantially the same in each of the devices. Any differences result simply from a shifting of points of contact or pressure, or the functional substitution of a part of one element for that of another, when this substitution actually results in a functional assimilation by one element of the other.

Defendants' motion for a new trial is denied.

IT IS SO ORDERED.

/s/ Floyd R. Gibson
Judge

Kansas City, Missouri,
June 26, 1963

NOTICE OF APPEAL
(Filed July 17, 1963)

Notice is hereby given that JOHN DEERE COMPANY OF KANSAS CITY, a corporation, and DEERE & COMPANY, a corporation, Defendants, hereby appeal to the United States Court of Appeals for the Eighth Circuit from the Judgment entered in the above cause on March 25, 1963, and from the Order Denying Motion for New Trial entered in said cause on June 26, 1963.

Scofield, Kokjer, Scofield & Lowe
By /s/ Thos. E. Scofield
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris
Attorneys for Defendants
By /s/ S. Tom Morris
Of Counsel

STIPULATION AS TO SUPERSEDEAS BOND AND STAY OF JUDGMENT PENDING APPEAL
(Filed July 17, 1963)

Defendants having filed notice of appeal in this cause and desiring to supersede the judgment herein pending final determination on appeal, it is agreed and stipulated between the parties that the amount of the supersedeas bond shall be TWO HUNDRED THOUSAND AND NO/100 ($200,000.00) DOLLARS, and that upon the filing of such bond by Defendants and the approval thereof by the Court,

the Judgment entered herein on March 25, 1963, shall be in all things stayed until the final determination of this cause on appeal.

It is further agreed and stipulated that this agreement as to the amount of the bond shall not in any manner determine or have any bearing upon the amount of damages, if any, to which Plaintiffs might ultimately be entitled

DATED this 17 day of July, 1963.

Fishburn and Gold
Attorneys for Plaintiffs

By /s/ Claude A. Fishburn
Of Counsel

Scofield, Kokjer, Scofield & Lowe
Attorneys for Defendants

By /s/ Thos. E. Scofield
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris
Attorneys for Defendants

By /s/ S. Tom Morris
Of Counsel

SUPERSEDEAS BOND

KNOW ALL MEN BY THESE PRESENTS, that we, JOHN DEERE COMPANY OF KANSAS CITY, a corporation, and DEERE & COMPANY, a corporation, as Principals, and FEDERAL INSURANCE COMPANY, as Surety, are held and firmly bound unto WILLIAM T. GRAHAM and GRAHAM PLOW, INC., in the sum of TWO HUNDRED THOUSAND AND NO/100 ($200,000.00) DOLLARS to be paid to the said WILLIAM T. GRAHAM and GRAHAM PLOW, INC., their attorneys, successors, executors, administrators or assigns, to which payment to be well and truly made we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally by these presents.

Sealed with our seals and dated this 17th day of July, 1963.

WHEREAS, on March 25, 1963, a judgment was rendered in the above-entitled action in favor of the above named obligees, and on June 26, 1963, an order was entered in said action denying the motion for new trial of JOHN DEERE COMPANY OF KANSAS CITY and DEERE & COMPANY, and the said JOHN DEERE COMPANY OF KANSAS CITY and DEERE & COMPANY have duly filed a notice of appeal from said judgment and order to the Court of Appeals for the Eighth Circuit; and

WHEREAS, the said JOHN DEERE COMPANY OF KANSAS CITY and DEERE & COMPANY desire a stay of all proceedings in the above-entitled cause until the determination of the said appeal,

NOW, THEREFORE, the condition of this bond is such that if the said JOHN DEERE COMPANY OF KANSAS CITY and DEERE & COMPANY, as Appellants, shall prosecute their appeal with effect and shall satisfy the said judgment in full together with costs, interest and damage for said delay if said appeal is dismissed or if the judgment is affirmed, and shall satisfy in full such modification of the judgment and costs, interest and damages as may be adjudged and awarded by the Court of Appeals, then this obligation to be void, otherwise to remain in full force and effect.

John Deere Company of Kansas City

By: /s/ M. K. Hubbard
Vice President

Deere & Company

By: /s/ Lewis D. Wilson
Vice President
Principals

Federal Insurance Company

By /s/ Albert E. Hart, Jr.
Attorney-in Fact
Surety

The foregoing bond is hereby approved this 17th day of July, 1963, to stand as a supersedeas until the final determination of the appeal.

/s/ Floyd R. Gibson
United States District Judge

ORDER STAYING JUDGMENT PENDING APPEAL
(Filed July 17, 1963)

It being shown to the Court that Defendants have duly filed notice of appeal, that the parties have stipulated as to the amount of the supersedeas bond and a stay of judgment pending appeal, and that Defendants have filed supersedeas bond in accordance with said stipulation;

IT IS THEREFORE ORDERED that the judgment of this Court entered in this cause on March 25, 1963, be and the same is hereby in all things stayed pending final determination of this cause upon appeal.

DATED this 17th day of July, 1963.

/s/ Floyd R. Gibson
United States District Judge

Approved:

Fishburn and Gold
Attorneys for Plaintiffs

By /s/ Claude A. Fishburn
Of Counsel

Scofield, Kokjer, Scofield & Lowe
Attorneys for Defendants

By /s/ Thos. E. Scofield
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris
Attorneys for Defendants

By /s/ S. Tom Morris
Of Counsel

DEFENDANTS' STATEMENT OF POINTS ON APPEAL

(Filed July 31, 1963)

Pursuant to Rule 75(d) of the Federal Rules of Civil Procedure Defendants make the following statement of points upon which they intend to rely on appeal:

I.

The District Court erred in holding United States Patent No. 2,627,798 valid for the following reasons:

A. The Court failed to give proper consideration and effect to the rule that the presumption of validity is weakened when pertinent prior art was not considered by the Patent Office, and the Court's finding that the presumption of validity in this case is not weakened by the fact that pertinent prior art was not considered by the Patent Office is clearly wrong.

B. The Court applied an incorrect and improper test of invention.

C. The Court's finding that Patent No. 2,627,798 exhibits invention and would not have been obvious to a person having ordinary skill in the art is clearly wrong.

II.

The District Court erred in holding that the Deere 650 clamp infringes claim 1 of the patent and in holding that the Deere 100 clamp infringes claims 1 and 2 of the patent, for the following reasons:

A. The Court construed and applied the claims of the patent broadly rather than narrowly as required by the language of the claims, the context of the patent, the prior art and the File Wrapper history.

B. The Court applied an incorrect and improper test and range of equivalence.

C. The Court's finding that the Deere 650 clamp is the equivalent of and infringes claim 1 of the patent is clearly wrong.

D. The Court's finding that the Deere 100 clamp is the equivalent of and infringes claims 1 and 2 of the patent is clearly wrong.

E. The Court's finding that the doctrine of File Wrapper Estoppel does not limit the scope of the claims so as to preclude their application to the Deere 650 and 100 clamp is clearly wrong.

Respectfully submitted,

Scofield, Kokjer, Scofield & Lowe
1325 Rialto Building
Kansas City, Missouri

By /s/ Thos. M. Scofield
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris
630 Amarillo Building
Amarillo, Texas

By /s/ S. Tom Morris
Of Counsel
Attorneys for Defendants

DEFENDANTS' DESIGNATION OF RECORD ON APPEAL

(Filed July 31, 1963)

Pursuant to Rule 75 of the Federal Rules of Civil Procedure Defendants hereby designate the following portions of the record, proceedings, and evidence to be contained in the record on their appeal in this cause:

1. The Complaint.

2. Defendants' Second Amended Answer and First Amended Counterclaim.

3. Plaintiffs' Reply to Defendants' First Amended Counterclaim.

4. The following portion of Plaintiffs' Interrogatories dated December 4, 1959, to-wit: the introductory paragraph and Interrogatories 31, 32, and 33.

5. The following portion of Defendants' Objections to Certain of Plaintiffs' Interrogatories, to-wit: the objection to Interrogatories Nos. 31 to 33.

6. The following portions of the Court's Memorandum and Order on Defendants' Objections to Certain of Plaintiffs' Interrogatories, to-wit: The Court's ruling with respect to Defendants' Objections to Interrogatories 31, 32 and 33 which reads as follows:

> "Defendants' Objections to Interrogatories 31, 32 and 33 are sustained. These interrogatories relate to a flexing of the shank of the accused device, and appear irrelevant since such a flexing is not a claim of the patent in suit and Plaintiffs do not undertake to otherwise demonstrate the relevancy of such inquiry."

7. Stipulation between the parties dated May 1, 1962.

8. Stipulation between the parties for the voluntary appearance of Deere & Company as a party Defendant, dated May 2, 1962.

9. The Reporter's Complete Original Transcript of proceedings had at the trial, including all of Plaintiffs' Exhibits except B. 1-10, F., G., H., X., and Y., and all of Defendants' Exhibits except Exhibits 49 and 50.

10. The Court's Amended Memorandum Opinion, Findings of Fact and Conclusions of Law dated March 11, 1963.

11. The Court's Judgment dated March 25, 1963.

12. Defendants' Motion for New Trial.

13. The Court's Order Denying Defendants' Motion for New Trial, dated June 26, 1963.

14. Defendants' Notice of Appeal.

15. Stipulation as to Supersedeas Bond and Stay of Judgment pending appeal.

16. Supersedeas Bond.

17. Order Staying Judgment Pending Appeal.

18. Defendants' Statement of Points on Appeal.

19. Defendants' Designation of Record for their appeal.

20. Any Orders to transmit original exhibits to the Court of Appeals.

21. Any Orders extending time for filing record and docketing appeal.

22. Clerk's Certificate.

Respectfully submitted,
Scofield, Kokjer, Scofield & Lowe

By /s/ Thos. M. Scofield
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris

By /s/ S. Tom Morris
Of Counsel
Attorneys for Defendants

ORDER FOR TRANSMITTAL OF ORIGINAL EXHIBITS TO THE COURT OF APPEALS

(Filed August 26, 1963.)

Upon agreement of the parties, and it appearing to the Court that it would be beneficial for the Court of Appeals to inspect certain of the original exhibits in this cause,

IT IS ORDERED that the following original exhibits be transmitted to the United States Court of Appeals for the Eighth Circuit in connection with Defendants' appeal, to-wit:

Plaintiffs' Exhibits C, D, D-1, E, E-1, I, J, L, M, N, and X.

Defendants' Exhibits 1, 2, 3, 3-A, 6, 11, 12, 13, 14A, 14B, 14C, 15, 16, 17, 17-A, 18, 19, 20, 21-A, 21-B, 21-C, 21-D, 22, 23, 24, 25, 26, 26-A, 27, 27-A, 28, 29, 30, 31, 33-A, 33-B, 34-A, 34-B, 38, 39, 41, 42-A, 42-B, 42-C, 42-D, 42-E, 42-F, 42-G, 42-H, 42-I, 45-A, 45-B, 46, 49, 52-A, 52-B, 52-C, and 52-D.

DATED August 26th, 1963.

/s/ Floyd Gibson
United States District Judge

Approved:

Fishburn & Gold
Attorneys for Plaintiffs

By /s/ Claude A. Fishburn
Of Counsel

Scofield, Kokjer, Scofield & Lowe

By _____
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris

By /s/ S. Tom Morris
Of Counsel
Attorneys for Defendants

ORDER EXTENDING TIME FOR FILING RECORD AND DOCKETING APPEAL

(Filed August 16, 1963.)

Upon agreement of the parties it is ordered that the time for filing the record and docketing the appeal of this cause in the United States Court of Appeals for the Eighth Circuit be and it is hereby extended to September 26, 1963,

which date is within the time as authorized by Rule 73(g) of the Federal Rules of Civil Procedure.

DATED this 16th day of August, 1963.

/s/ John W. Oliver
United States District Judge

Approved:

Fishburn and Gold
Attorneys for Plaintiffs

By /s/ Claude A. Fishburn
Of Counsel

Scofield, Kokjer, Scofield & Lowe

By /s/ Carter H. Kokjer
Of Counsel

Gibson, Ochsner, Harlan, Kinney & Morris

By /s/ S. Tom Morris
Of Counsel
Attorneys for Defendants

PLAINTIFFS' DESIGNATION OF RECORD ON APPEAL
(Filed August 8, 1963)

Plaintiffs designate for inclusion in the record on appeal in the above-entitled cause Plaintiffs' Interrogatories numbered 2 and 38 and Defendants' Answers thereto.

* * *

Plaintiffs also designate (physical exhibits) Plaintiffs' Exhibit X and Defendants' Exhibit 49 (offered by Plaintiffs).

Plaintiffs' Designation of Record on Appeal.

Dated: August 7, 1963.

Fishburn and Gold
By /s/ Claude A. Fishburn
Attorneys for Plaintiffs

DOCKET ENTRIES

Filings—Proceedings

Sept.	24, 1959	Complaint filed.
Nov.	13, "	Answer & Counter-claim filed.
Nov.	30, "	Plaintiffs' reply to defendant's Counterclaim filed.
Dec.	2, "	Defendant's Amended Answer and Counterclaim filed.
Dec.	4, "	Plaintiffs' Interrogatories to defendant filed.
		Plaintiffs' Reply to defendant's counterclaim in its amended answer filed.
Jan.	11, 1960	Defendant's Objections to certain of Plaintiffs' Interrogatories and brief in support thereof filed.
Jan.	18, "	Defendant's answers to certain of plaintiffs' Interrogatories filed.
Mar.	1, "	Memorandum and Order on defendant's objections to certain of plaintiffs' interrogatories filed. (overruled in part and sustained in part)
Mar.	31, "	Defendant's answers to certain of Plaintiffs' Interrogatories filed.
Dec.	21, 1961	Defendant's Second Amended Answer and First Amended Counterclaim filed.
Dec.	27, "	Plaintiffs' Reply to Defendant's First Amended Counterclaim filed.
Jan.	4, 1962	Pre-Trial Memorandum and Order filed. (Defendant granted leave to amend its answer—Parties to file stipulation of agreed facts.)
Jan.	30, "	Modification of Pre-Trial Order and Memorandum of January 3, 1962, filed.
Apr.	13, "	Motion of Plaintiffs to add Deere and Company as Party defendant with suggestions in support filed.
May	1, "	Order sustaining motion to add party defendant filed.

May	2, "	Parties appear by counsel and announce ready for trial. Trial is to the Court. Stipulation filed. Opening statements are made by respective counsel. Plaintiffs present evidence; said evidence not completed at the hour of adjournment, further proceedings postponed until May 3, 1962.
May	3, "	Trial resumed. Plaintiffs continue evidence.
May	4, "	Trial resumed. Plaintiffs continue evidence and rest. Defendants introduce testimony. Further proceedings postponed until May 7, 1962.
May	7, "	Trial resumed. Defendants continue evidence.
May	8, "	Trial resumed. Defendants continue evidence.
May	9, "	Trial resumed. Defendants continue evidence.
May	10, "	Trial resumed. Defendants complete evidence and rest. Plaintiffs introduce evidence in rebuttal.
May	11, "	Trial resumed. Plaintiffs complete evidence in rebuttal and rest. Case submitted and taken under advisement. Parties to file briefs and suggested findings of fact and conclusions of law simultaneously thirty days after receipt of transcript of record. Reply briefs to be filed 15 days thereafter.
Oct.	29, "	Transcript of Proceedings filed. (3 volumes)
Feb.	8, 1963	Memorandum Opinion, Findings of Fact and Conclusions of Law filed. Letter from Judge Gibson granting counsel 10 days in which to submit any suggested amendments to Memorandum Opinion filed herein.)
Feb.	15, "	Letter from defendants' counsel suggesting amendments filed.

Feb.	20, "	Letter from Plaintiffs' counsel suggesting amendments filed.
Mar.	18, "	Amended Memorandum Opinion, Findings of Fact, and Conclusions of law filed. *Judge Floyd R. Gibson.*
Mar.	25, "	JUDGMENT FILED. (Plaintiff William T. Graham lawful owner U. S. Letters Patent No. 2,627,798. Claims 1 and 2 of said patent are valid. Claims 1 and 2 have been infringed by defendants. Defendants enjoined from infringing of claims 1 and 2 of said patent. Plaintiffs shall have judgment for damages against defendants in accordance with Title 35, U.S.C., Sec. 284. Issues in favor of Plaintiffs and against defendants on defendants' Counterclaim. Costs are assessed against defendants.)
Apr.	3, "	Motion for New Trial with suggestions in support filed.
Apr.	5, "	Order staying Judgment pending Motion for New Trial filed.
June	4, "	Respective parties appear by counsel for hearing on defendants' Motion for New Trial. Arguments are made and the Motion submitted and taken under advisement.
Jun.	26, "	Order denying defendants' Motion for New Trial filed.
July	17 "	Defendants' NOTICE OF APPEAL FILED. Copies mailed to Counsel for Plaintiffs.
		Order staying Judgment pending Appeal filed.
		Stipulation as to Supersedeas Bond and stay of Judgment pending appeal filed. Supersedeas Bond approved and filed.
Jul.	31, "	Defendants' Designation of Record on Appeal filed.
		Defendants' Statement of Points on Appeal filed.

Aug.	8, "	Plaintiffs' Designation of Record on Appeal filed.
Aug.	9, "	Exhibits filed.
Aug.	16, "	Order extending to September 26, 1963, to docket the appeal filed.
Aug.	26, "	Order for transmittal of original Exhibits to the Court of Appeals filed.

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[1]* IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF MISSOURI
WESTERN DIVISION

WILLIAM T. GRAHAM and GRAHAM PLOW, INC.,
Plaintiffs,
vs.
JOHN DEERE COMPANY OF KANSAS CITY, a corporation, and DEERE & COMPANY, a corporation,
Defendants.
} Civil Action No. 12538-2

TRANSCRIPT OF PROCEEDINGS

On Wednesday, May 2, 1962, the above-entitled cause came on for hearing before the Honorable FLOYD R. GIBSON, one of the Judges of said court, at Kansas City, Missouri.

The Plaintiffs were represented by their counsel, Messrs. Claude A. Fishburn and Orville O. Gold.

The Defendants were represented by their counsel, Gibson, Ochsner, Harlan, Kinney & Morris, by Mr. S. Tom Morris, and Scofield, Kokjer, Scofield & Lowe, by Thomas E. Scofield.

The following proceedings were had and entered of record:

* * *

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*Refers to page of the typewritten transcript of proceedings.

[42] Mr. Fishburn: Now at this time plaintiff has about a 20-minute film showing these plows in operation, the background, the history, the reason for developing this type of plowing.

* * *

[43] Mr. Morris: Might I inquire what the subject matter of the film is?

Mr. Fishburn: You have seen it, Mr. Morris, part of it. It is the subject of the saving of the soil and is part of that film down in Arkansas and a few other instances of the rigid clamp and the spring clamp both.

Mr. Morris: It might be helpful to the Court, might be interesting.

The Court: Very well.

* * *

[44] (Film shown.)

We are ready to start our case, Your Honor.

PLAINTIFFS' CASE

CHARLES THEODORE PARKER, called as a witness on behalf of the plaintiffs, was duly sworn and testified as follows:

Direct Examination by Mr. Gold.

Q. Will you give your name and address. A. Charles Theodore Parker, 2434 12th Street, Moline, Illinois.

Q. By whom are you employed? A. Deere & Company.

Q. Is that the Deere & Company who have the office in [45] Moline, Illinois? A. Yes.

Q. That would be the parent company, we might say? A. Yes.

Q. That is now a corporation of Delaware, is it not? A. Yes.

Q. Your employer is the wholly—owns all of the stock of the John Deere Company of Kansas City? A. Yes.

Q. Is your employment full time employment? A. It is.

Q. What is your position? A. General patent attorney.

Q. What are your duties? A. Well, I am the manager of the patent department and have charge of matters pertaining to the patents, trademarks and copyrights.

Q. Are you familiar with the operations of Deere & Company? A. Generally.

Q. Are you familiar with the product that Deere & Company manufactures and sells? A. Yes.

Q. Are you an officer of the company? A. No.

Q. You say you are a patent attorney. You are an attorney [46] at law, are you not? A. Yes.

Q. Registered to practice before the Patent Office? A. Yes.

Q. Do you receive your salary from Deere & Company? A. Yes.

Q. Do any of the branches or subsidiaries of Deere & Company have a patent department? A. No.

Q. Your patent department serves all of the branches or subsidiaries as to any patent matters they might have? A. Yes.

Q. Where are plows manufactured by the Deere & Company? A. Which kind of plows?

Q. The chisel type plows. A. John Deere Des Moines Works, Des Moines, Iowa.

Q. That is a manufacturing plant of the parent company? A. Yes.

Q. At the time—well, say in the years 1953 and 1954, how was the Des Moines Works connected with Deere & Company? A. It was owned by a subsidiary, wholly owned by Deere & Company. The name of it was Deere Manufacturing Company.

Q. That was an Iowa corporation? A. Yes.

Q. And the plant itself was owned by the Iowa corporation [47] and the Iowa corporation was a wholly-owned subsidiary of Deere & Company? A. Right.

Q. Approximately how many employees do you have in your patent department? A. 11.

Q. Can you give us the categories of their work? A. Well, there are five attorneys, three draftsmen, and three girls.

Q. And when you say there are five attorneys, are those each lawyers? A. Yes, they are all admitted to the bar.

Q. And are they all admitted to practice before the United States Patent Office? A. Yes.

Q. Are the attorneys in your department on a full time employment? A. Yes. Pardon me, our youngest attorney has passed the bar examination, but he is not—I don't believe—I don't know just what date he will be admitted, but it is just a little technicality there.

Q. At the times that we are going to have reference to relative to some correspondence, any of the attorneys that would have signed the correspondence would have been lawyers? [48] A. That is right, they are attorneys.

Q. What are the duties of your attorneys in your office? A. Well, in the first place, they should study every new implement that we design or new improvement in our—the implements in our line to be sure that they do not infringe other people's patents. We consider that the most important duty. They should also investigate each of the new implements or new improvements in old implements to see if they contain patentable subject matter that we might obtain some patent protection on. Those are the two main duties of our attorneys.

Q. Do they visit your various manufacturing plants? A. Yes.

Q. And engineering departments? A. Yes.

Q. And is that one manner in which they keep advised of new designs and new equipment? A. Yes, they visit plants and they sometimes go out in the field to see implements perform, and we correspond with the engineers by mail quite a bit. They send us drawings, photographs.

Q. Any new designs that might be devised by a manufacturing plant would be sent to your department for consideration? A. Yes.

Q. I understand that your department also applies for the [49] patents that you might be able to obtain on your products? A. Yes.

Q. Do you also make patent searches to see whether or not a device was novel and patentable, as well as infringement searches? A. That is right.

Q. Where would those searches be made? A. In our office we have a library of all farm implement patents and patents relating to tractors and internal combustion engines of various kinds and industrial line of earth moving equipment.

Q. You take the official Patent Office Gazette? A. Yes.

Q. That is a publication by United States Patent Office, is it not? A. Yes.

Q. Is this all of the patents that issue each week, is that correct? A. Yes.

Q. Does one of your employees go through the Patent Office Gazette and pick out the patents that you might be interested in having in your library? A. Yes. We order two copies of each one, one for our library and one for the engineers in the factory that [50] is most closely associated with that type of implement.

Q. And the plant that would be building plows, particularly chisel plows, would have a duplicate of your portion of your library and patent copies of patents relating to chisel plows? A. Yes.

Q. Does the manufacturing plant maintain a library of copies of patents? A. Yes.

Q. So they are always available to the engineers? A. They keep the copies that we send them and in some order, in books or boxes.

Q. And they are always available to the engineers in the plant? A. Yes.

Q. Do you supervise the making of searches? A. Yes.

Q. How long have you been head of the patent department of Deere and Company? A. 15 years next month.

Q. And what were your duties prior to the time you became the manager? A. I was assistant manager.

Q. And how long have you been with Deere & Company in their patent department? [51] A. 26 years.

Q. Do you prosecute applications for patents yourself for the company? A. Yes.

Q. When you file an application for a patent in the Patent Office, what is the procedure in the Patent Office, do you know? A. Well, a patent application is given a number and assigned to a certain division of the Patent Office that handles that type of invention, and assigned to one of the examiners; there are several examiners in each division. The examiner makes his own search and lists the number of patents that he finds that are most pertinent. He then—

Q. Just a minute, Mr. Parker. Of course the application may lay there for some time before it reaches its turn for examination, is that correct? A. Yes. After it is given the serial number it probably is there anywhere from six months to more than a year at the present time. It used to be even longer.

Q. Then when the examiner reaches the application for action he would first read the application, would he not? A. He would read it, get an understanding of what the invention is, look at the drawings, and then he would [52] make his search.

Q. And where would he make this search? A. In the patent files of the Patent Office. He probably has a stack of patents of his own that apply to his particular sub-class of inventions.

Q. Each division has a large number of cases with what they call shoes of patents, do they not? A. Yes.

Q. Those patents which relate to the art they are handling? A. That is right.

Q. And that art would be classified and sub-classified so as to aid in finding it? A. Yes.

Q. Does the examiner search through many patents when he makes his search? A. Yes, I would say several hundred.

Q. Ordinarily even though he searched through several hundred how many might he cite in an action? A. Oh, anywhere from one to perhaps a dozen or so.

Q. But he would have considered all those he searched, wouldn't he, the several hundred? A. Yes.

Q. If he found two or three patents that were similar as far as being applied to the application he was searching, he would probably only cite one of those [53] similar patents, would he not? A. That might be true. I don't know whether I would say probably. He usually cites more than one, cites several. He would only cite one if it showed exactly what you were claiming.

Q. But he wouldn't cite a cumulative group of patents all for the same purpose of showing one element of the claim, or something like that, would he? A. He would cite enough of them to be representative. It would depend on how the element is used in combination with other elements as to how pertinent the patent is.

Q. Did you have some patent attorneys in your department in 1953 and '54 that worked particularly with the Des Moines plant? A. Yes.

Q. Could you give me their names? A. Roger C. Johnson and William A. Murray.

Mr. Morris: If you are searching for that file of correspondence, Mr. Gold, here is the original file in chronological order.

Mr. Gold: Thank you. That is fine.

Your Honor, we have different exhibits here. The defendant has identified a number of them and no need of having duplications. Since they have a number [54] on them I am going to use some of the defendants' exhibits.

The Court: I assume that is agreeable with defendant?

Mr. Morris: Entirely satisfactory. We had numbered them in anticipation of use in our case, and one number is sufficient.

Q. (By Mr. Gold) Mr. Parker, I have handed you a number of papers that have been identified, I believe, or have identification number of Defendants' Exhibit No. 32, is that correct? A. Yes.

Q. Do you recognize those papers? A. Yes.

Q. That is a group of papers that you produced at the time of taking your deposition in Moline, Illinois, about March 27th, is that correct? A. Yes.

Q. March 27, 1962. Can you turn to those papers and tell me what is the first item in the group. A. The first item is a letter to the Deere & Company patent department, addressed to my attention, from E. C. Bopf, B-o-p-f, the chief product engineer of our John Deere Des Moines Works. This letter explains that his department is in the process of redesigning [55] a tool carrier and proposing to offer as optional equipment a flat spring standard. It goes on to describe it.

* * *

[56] Q. (By Mr. Gold) Mr. Parker, that letter referred to "a flat spring standard 1 X 2 in cross section identical to that which Graham-Hoeme furnishes as regular equipment." When they use the word standard, is that the same as what we have been referring to as shanks? A. Yes, that is just the shank, the 1 X 2-inch curved shank that is supported on a frame at the upper end and carries the tool at the lower end.

Q. This is smaller than one of the others, but this curved part back here, that is what you refer to? A. That is the shank, yes.

Q. Either as standard or shank? The words are equivalent? A. Yes.

Q. I believe that that letter referred to a drawing, did [57] it not? A. Yes, XCA-318.

Mr. Gold: Your Honor, a similar situation exists relative to drawings. The defendant had the originals, we had copies. We are going to use theirs and use their identifications.

Q. (By Mr. Gold) I hand you two drawings that have been marked Defendants' Exhibits 33-A and 33-B. Do you recognize those drawings? A. Yes.

Q. Were those the drawings that were attached to the letter that you have been referring to, the first letter in the Defendants' Exhibit 32? A. Yes. These drawings showed their first attempt to design a spring clamp.

Q. Can you tell me generally the difference between the drawings, Defendants' Exhibit 33-A and 33-B? A. 33-A is the welded assembly of the fixed member of the clamp element. It is made up of several welded plates at angles, welded together.

33-B is an assembly drawing, showing other parts of the clamp and showing how the flat spring standard is secured to the clamp.

Q. In other words, Defendants' Exhibit 33-A would be a detail dimensional drawing of the one fixed piece, is [58] that it? A. Yes.

Q. Makes up a part of the assembly that is shown in Defendants' Exhibit 33-B? A. Yes.

Q. What happened after you received the letter and drawings from Mr. Bopf? A. Well, we made an infringement search and we were particularly warned by Mr. Bopf's statement that this was similar to the clamp that Graham-Hoeme furnishes. We always ask our engineers to let us know if they know of anything that is similar because that is what we pay particular attention to, to determine whether there is any infringement or not.

Now, after making the search we found that the 798 patent, now in litigation, was—while this was not a copy of it, it did have the elements closely enough to what was claimed that we decided that it was an infringement of the 798 patent and we told the engineers of that fact. Later a letter.

Q. Now, this device that was shown in those drawings, Defendants' Exhibit 33-A and 33-B, was the forerunner of the spring clamp later called the 650 series? A. Yes, 650. This clamp they built up one or two of them before we had a chance to tell them about the [59] infringement, the likelihood of infringement, and they tested it and that is as far as they went with this one.

Q. But that was the forerunner of this clamp here that I am now holding up? Can you see it, Mr. Parker? A. I believe that is right. That looks like the 650.

Mr. Gold: And this clamp has been identified, in accordance with the stipulation, Your Honor, as Plaintiffs' Exhibit I.

The Court: That drawing is Defendants' Exhibit 33—

Mr. Gold: 33-A and 33-B, sir. There are two drawings. The letters, group of letters, are Defendants' Exhibit 32.

Q. (By Mr. Gold) Mr. Parker, was there a letter written to the Des Moines Works giving the opinion of your patent department? A. Yes.

Q. And is that letter in Defendants' Exhibit 32? A. Yes. That is the next letter that is in the Exhibit 32.

* * *

[60] The Court: We will be in recess until 2 o'clock.
(Noon recess.)

[61] AFTERNOON SESSION, WEDNESDAY, MAY 2, 1962

CHARLES THEODORE PARKER, resumed the stand and testified further as follows:

Direct Examination (Continued) by Mr. Gold.

Q. Mr. Parker, I believe at the time we recessed for noon you were referring to a reply that was made by your office to Mr. Bopf. Is that correct? A. Yes.

Q. Will you identify the letter by date and also the material that is attached to it. A. October 23, 1953, from Roger C. Johnson, patent attorney, to E. C. Bopf. He attached to it a search report.

Q. Then there were four pages went with that letter, or that letter was two pages and two pages of the report? A. Yes.

Q. I believe on the letter there is a reference number, is there not? A. Reference to the Graham patent.

Q. No, I mean the reference number E-2518-J. To what does that number refer? A. That refers to a file that was opened at the time we first heard about this particular machine. When a [62] factory starts work on designing a machine or approving it, we start an "E" file; "E" probably stands for experimental.

Q. But that number didn't appear on the drawings, did it, sir? A. Oh, no, that is just the patent department reference number.

Q. And I believe you stated this morning that in that letter you advised Mr. Bopf that the structure shown in the drawing, Defendants' Exhibits 33-A and 33-B, would infringe the Graham 798 patent, is that correct? A. Yes.

Q. Were any pencil drawings returned to Mr. Bopf with that letter? A. Yes. He sent us two copies of each drawing and Mr. Johnson marked up drawings in a couple of places and used them to illustrate his opinion.

Q. I now hand you two drawings which have been marked for identification Defendants' Exhibits 34-A and 34-B. Would those be the drawings that were attached to Mr. Johnson's reply to Mr. Bopf? A. Yes.

Q. Will you tell us what would be different in these drawings than the drawings, Defendants' Exhibit 33-A and 33-B? [63] A. In 34-A there are some green underline marks and a few shading marks on this top here marked in green.

Q. When you say the shading marks marked in green, that would be the portions in the upper figure that would be to the right of that figure? A. Yes.

Q. And the parts marked in green on the other figures would be lower surfaces of those same portions? A. That is right.

Q. Now, I am holding Defendants' Exhibit 34-B up here and you have Defendants' Exhibit 33-B before you. Can you point out the differences in those drawings? A. Well, this in brown is illustrated—this brown crayon illustrated a pipe spacer that—the purpose of which—well, the purpose of all these marks was to show what appeared to be the—what the patent claims emphasized, and what distinguished the patent claims mainly from the prior art, and so Mr. Johnson was showing him what seemed to be the Graham invention there and told them that that is what they would have to avoid in order not to copy Graham's invention. The pipe spacer was just one suggestion. He wasn't trying to design something practical, but to illustrate how the design could be revised so as not to use the Graham invention.

Q. Actually what he was doing was trying to make some [64] arrangement whereby the plate member above the shank would not contact the fixed member to form a stop, is that correct? A. That is right. The patent claims emphasized the coming together of two surfaces on the hinged member on the one hand and the fixed member of the clamp on the other hand, and those two surfaces, the

description of those in the claim took up several lines, which indicated that that was one of the important parts of the claim.

Q. So Mr. Johnson was suggesting the variation in the stop, but it would still serve the same function, is that correct? A. Well, of course all spring clamps have to have a stop, and when the spring brings the parts together all clamps in the prior art and any new clamp that is designed has to stop it in a definite location so that the bottom point of the tool, the lower end of the shank, will be in the proper position relative to the ground. The pipe spacer was one way of setting a limit to the action of the pivoted clamp member in a different manner than is described in the claim.

Q. The two abutting faces in the Graham 798 patent structure were also intended to position the tool in the right angle according to the ground it was plowing? A. Yes.

[65] Q. Am I correct in saying that you want the correct angle to get what they call suction? A. That is right, suction or penetration of the tool into the ground.

Q. That suction would be so that as you are plowing the tool will tend to stay in the ground rather than be pushed back up, is that right? A. Yes. That is mainly the case of the sweep rather than the spike or the chisel. The sweep must go under the ground at an angle in order that it will penetrate.

Q. When you refer to a sweep you are referring to a tool like this (indicating)? A. That is right. The point of the sweep is slightly higher than the rear part of it or it would never go into the ground, it would just slide along the surface.

Q. Now, will you turn to the next letter in Defendants' Exhibit 32 and tell us what that is. A. It is just a letter of transmittal from R. C. Johnson to E. C. Bopf, dated November 4, 1953. It is transmitting some drawings of prior art patents, three foreign patents.

Q. That might be said to be an extension or further citation of patents in his search report? A. Yes. These are the three foreign patents that were [66] cited in the Graham patent application that matured into patent 798.

Q. Now will you turn to the next letter and tell us what that is. A. That is an order from our patent department to the United States Patent Office in Washington, asking or ordering a photostat copy of the complete file in the 798 Graham patent.

Q. And that was dated November 9, 1953? A. November 9, 1953.

Q. You were ordering what would be called a file wrapper? A. File wrapper, yes.

Q. Now turn to the next letter, please, and tell us what that is. A. It is a letter dated November 10, 1953, from Mr. Bopf to Mr. Johnson again, sending a print of another drawing, CL-134-N, and in this drawing he shows a new design that has been made with the idea of avoiding the use of Mr. Graham's invention. He asks the opinion of the patent department, of Mr. Johnson, as to whether that was an infringement of the Graham patent. The same letter also transmits another drawing, CL-135-N, which is another print of the same drawing, I believe, except that he has marked in in pencil an adjustable stop device by which the angle of penetration of a sweep [67] can be adjusted.

Q. Now I show you drawing that has been marked Defendants' Exhibit 38. Is that the first drawing that you had reference to that was attached to the letter of Mr. Bopf of November 10, 1953? A. Yes.

Q. I now show you a drawing which has been marked for identification Defendants' Exhibit 39. Is that the other drawing that you had reference to? A. Yes, that is XCL-35, showing in pencil this adjustable stop member.

Q. That adjustable stop is a bolt, is it not? A. Yes. He has used a bolt for that stop and his question there was whether perhaps that would constitute invention on the part of our engineers. He says that if Mr. Johnson sees fit to file a patent application on that variation or that variation of the structure, that Dwight Hunter is the inventor of that particular detail.

Q. Now, what is the next letter in Defendants' Exhibit 32? A. It is a letter from Roger Johnson to E. C. Bopf, dated November 13, 1953, telling him that these two prints were sent, that we just received, were in his opinion

not infringements of the Graham 798 patent and that we could—he felt that we could safely adopt [68] that design.

Q. He then said that the patent ability of those designs was rather doubtful, did he not? A. Yes. It is a very specific little detail there that he wasn't sure whether we could get a patent on it or not.

Q. Will you read the last paragraph of the letter of November 13, 1953, read it aloud, please. A. "However, it might, nevertheless, be advisable to file a patent application so that, if allowed, it could be used to convince Graham that our design is different from his."

Q. Do you subscribe to the idea that if you got a patent on that structure that that would indicate it would not infringe the earlier patent?

Mr. Morris: Your Honor, I believe that is a matter of law and calls for opinion as to a question of law, which is not proper examination of this witness.

The Court: Yes, I think it is asking for a legal conclusion. Sustained.

Q. (By Mr. Gold) Was there a memorandum attached to the letter of November 13, 1953? A. I don't see any evidence that there was. The letter doesn't mention any. The next [illegible]n the file is a [69] memorandum that is dated December 1, 1953.

Q. That is a 2-page memorandum? A. Yes, but it would not seem that that went with this letter of November 15th.

Q. And the date on that memorandum is on the second page under Mr. Johnson's name? A. Yes, December 1st.

Q. Generally what is the subject of the memorandum? A. The subject is the Graham patent 798, and it was evidently written soon after receiving the file history of the Graham patent, after Mr. Johnson studied that file history, which is rather a customary way to obtain an interpretation of what the inventor considered his invention, and at the time he applied for the patent.

Q. Now, what is the next letter in the Defendants' Exhibit 32? Would that be the letter of transmittal of the memorandum? A. That is the one that transmitted the memorandum I do believe. It doesn't say so, but I believe

that a copy of the memorandum was sent along with this letter in which Mr. Johnson inquires about some photographs that show a spring clamp that was very—that appeared to be the same as the original welded construction shown in the first drawing in this group of exhibits.

[70] Q. That would be like shown in the drawings Defendants' Exhibits 33-A and 33-B, is that correct? A. Yes, I think that is right. In this letter—he had just seen these photographs come through from our advertising department and he wanted to know whether they were following that design because it appeared to be the design that he had told our engineers was an infringement. These photographs were taken just to preserve the design in the file, but they had already abandoned the use of them.

Q. It wouldn't have been very practical to have made the device out of fabricated steel, would it? You would make it out of a casting anyway, would you not? A. Well, casting is the way that type clamp has always been made, so the weld design was for—was because that was easier to make a test model.

Q. What was the nature of the next letter in the group, Defendants' Exhibit 32? A. I might just correct my last—one of my last statements. This letter of December 1st does mention that it is transmitting a copy of the memorandum. Then the next letter is a letter from Mr. Bopf to Roger Johnson, dated December 8, '53, explaining that the spring clamps that are shown in these photographs are not the design we are putting into production. This [71] letter also is a letter of transmittal of the print, CL-136.

Q. I believe there is a pencil notation on the letter of December 8, 1953. Do you note those notations? A. Yes. Mr. Bopf is referring to a conclusion of Mr. Johnson's. This pencil notation is in my handwriting. I put it in there. It reads, "In the memo of 12-1," in other words, I was—

Q. You put it in there for your own identification? A. My own identification as to where I can find this conclusion, because the conclusion was not in Johnson's letter of December 1st. So when I couldn't find it there, I read the

memorandum and found it and made this note so I could refer to it easily again if I ever wanted to.

Q. I now show you a drawing marked for identification Defendants' Exhibit 41. Is that the drawing that accompanied Mr. Bopf's letter of December 8, 1953? A. Yes, that is the one.

Q. This drawing has some pencil marks and letters on it. That has been added subsequently, has it not? A. That was during Mr. Hunter's deposition last month.

Q. Were there any other drawings sent to you with that letter of December 8, 1953? A. No, I think not.

[72] Q. What is the next letter in Defendants' Exhibit 32? A. Letter from Mr. Johnson to Mr. Bopf, dated December 11th. It is an answer to Mr. Bopf's letter of December 8th.

Q. He also commented on the possibility of filing applications for patent on Mr. Hunter's structure? A. Yes. He refers to the fact that this XCL-136 is their proposed production design, and notes that there is no adjustable stop on this design, and asks Mr. Bopf if he thinks it would be worth applying for a patent.

Q. On the second page of that letter I believe there is a pencil notation. In whose handwriting is that? A. That is mine.

Q. Now will you turn to the next letter in Defendants' Exhibit 32 and tell us what that is. A. It is a letter dated December 16th from Mr. Bopf to Mr. Johnson.

Q. That letter also has a pencil notation on it, I believe. Is that your identification? A. That is right. In this letter Mr. Bopf is suggesting what might be considered a patentable improvement in this design over any of the prior art.

Q. Will you read the third sentence in the first paragraph of that letter. A. "We know no advantage in this design insofar as it [73] differs from that shown in the Graham patent 2,627,798 except that it avoids the claims of this patent." Then he goes on to explain what might be considered an advantage, though, which is somewhat contradiction of that statement.

Q. Now, will you turn to the next letter, please, and tell us what that is. A. A letter from Roger Johnson to E. C. Bopf, dated December 30th, in which Mr. Johnson decides that the advantage stated by Mr. Bopf, that this particular design of stop lug could be made more accurately than any of the previous designs, or then the prior art, that that advantage would make it worth while to file a patent application and see if we couldn't get a claim on it. So he tells Mr. Bopf he has decided to file a patent application and asked for some other prints, detailed parts, to help him make up the patent copies.

Q. Now, will you turn to the next letter and tell us what that is. A. A letter from Bopf to Johnson, dated January 4th.

Q. Is that a letter of transmittal of some detail drawings? A. And states that he presumes we will show both the production drawing with the fixed stop lug and also the other modification in which an adjustable stop plug is [74] used, show those in the same application and attempt to get some claims on both embodiments.

Q. Mr. Parker, I show you a drawing that has been marked Defendants' Exhibit 42-A. Is that one of the drawings that was sent to you in Mr. Popf's letter of January 4, 1954? A. Well, it could have been. I can't substantiate that. It is a detailed part of the clamp.

Q. Can you tell us what part of the clamp is shown on that drawing? A. That is the fixed half of the clamp on the tool bar.

Q. Can you give us the number here, Deere & Company number of the drawing? A. Drawing number is C-21-N.

Q. That is in what we might call the name box at the lower right-hand corner of the drawing? A. Yes.

The Court: What exhibit number is that?

Mr. Gold: Defendants' Exhibit 42-A, sir.

Q. (By Mr. Gold) Mr. Parker, I have a clamp here. It has a tag on it, marked Defendants' Exhibit 26-A. Can you point to the part that is shown in the drawing, Defendants' Exhibit 42-A? [75] A. That is this part here (indicating).

Q. That is the part that is below the square bar? A. Yes, below the square bar through which the other parts extend. It is a box-like casting.

Q. Now, this clamp has a cap member over the square bar, does it not? A. Yes.

Q. That is fastened to the lower part by bolts? A. Yes.

Q. And the cap, the bolts in the lower member that you referred to could all be called the fixed member? A. Yes, that is a fixed member as contrasted with this pivoted member that is attached to the shank.

Q. The square bar would be part of the frame, would it not? A. Yes.

Q. Now I show you the drawing that has been marked for identification Defendants' Exhibit 42-B. Can you tell us what that is? A. That is the pivot part of the clamp. That is the part to which the shank is connected.

Q. Can you point out on this clamp, Defendants' Exhibit 26-A, that pivoted part? A. Yes, right here. It is this part that is pivoted—here is the back of it here.

* * *

[76] The Court: Which is the pivoted part?

A. It is pivoted here to the fixed member and at the front end it is bolted to the front end of this tool shank. There is the front end of the pivoted member right there (indicating).

Q. (By Mr. Gold) Would that be a plate lying on the top of the shank? A. Yes.

* * *

Q. (By Mr. Gold) Now I show you drawing, Defendants' Exhibit 42-C. Can you tell what that is? A. Well, that is the casting that the coil spring rests upon.

Q. Might be said to be like a washer at the lower end of the coil spring? A. Yes.

Q. And I have another drawing, Defendants' Exhibit 42-D. Is that the washer at the upper end of the spring? A. Yes, it is called cap spring.

[77] Q. Defendants' Exhibit 42-E, is that the coil spring? A. That is the coil spring itself, yes.

Q. And Defendants' Exhibit 42-F, what is that? A. U-bolt over which the springs are mounted.

Q. You might call it a spring bolt? A. Yes. The drawing calls it a clip, but I would call it a U-bolt myself.

Q. Now I have a drawing, Defendants' Exhibit 42-G. Is that the shank? A. That is the shank or what our engineers refer to as the flat spring standard, curved shank the tool is mounted on.

Q. Like the one I held up earlier that had the curved member? A. Yes.

Q. On which the tool was fastened to the lower end of? A. Yes.

Q. Now I have Defendants' Exhibit 42-H. Will you tell me what that is. A. That is a retainer clip. I could describe it better if I saw the machine.

Q. Here is Defendants' Exhibit 42-I. Can you tell me what that is? A. It is just a pivot pin drawing.

Q. Mr. Parker, we have now dismantled the clamp, [78] Defendants' Exhibit 26-A, and I would like for you to step over to the table and help us identify each of the parts according to how they correspond with the numbers of the drawings that we have talked about. A. Defendants' Exhibit 42-A shows the lower casting in the fixed part of the clamp, and that is this part (indicating).

Q. That is this large casting under the square bar? A. Yes.

Q. And that casting is held to the square frame bar or tool bar by the top cap and two bolts, is that correct? A. That is right.

The Court: Is that a single piece casting there?

Mr. Gold: This lower part is, sir. The upper part is a separate casting, and the two bolts, and this is the frame member.

Q. (By Mr. Gold) Mr. Parker, awhile ago we had difficulty showing the fixed member or plate. Now, holding the fixed member inverted, does that member go inside of the channel? A. Yes, in there like that (indicating), pivoted by this pivot pin, so it is pivoted to the fixed part (demonstrating).

Q. Now I have Defendants' Exhibit 42-G, which you said [79] was the shank. A. This is the shank with most of it cut off. This is just the top part of the shank shown here where it bolts to the pivoted member of the clamp. All the bottom curved part has been cut off.

The Court: What is that called, the flat spring standard?

A. Yes.

Q. (By Mr. Gold) And we also refer to it as the shank. The part we have here is primarily the part in the clamp, is it not? A. That is right.

The Court: What is the part called that fits into the lower casting there that pivots?

A. Well, I call it the pivoted portion of the shank—pivoted portion of the clamp.

The Court: That is in drawing 42-B?

Mr. Morris: That is correct, Your Honor.

A. The drawing is called the hinge standard.

Q. (By Mr. Gold) And that is on Defendants' Exhibit 42-B? A. 42-B.

The Court: You called that first the pivoted part of the shank or the clamp.

A. Of the clamp. I made a mistake there.

[80] Mr. Morris: From time to time that part and a similar part of other devices may be called a hinge member, a fulcrum plate, a pivoted member or a shank attaching member. Those four names are used from time to time in various phases of this matter.

Q. (By Mr. Gold) I show you Defendants' Exhibit 42-H. Can you show us that part? A. Retainer clip, that is this (indicating).

Q. Now can you tell us where that clip is fastened? A. The retainer clip is mounted on the same bolt that holds the upper end of the tool shank to the pivoted member of the clamp. The retainer clip is just a small angle member that holds the U-bolt that is connected to—the two legs of which go up through the two coil springs to the connection at the top.

Q. U-bolt is shown on which drawing? A. Defendants' Exhibit 42-F.

Q. Now, would the U-bolt go under the shank at the end and under the clip as I am holding it now? A. Under the clip, yes. The clip turns down to prevent the U-bolt from sliding away from the front end of the shank.

Q. And that would be at the forward end of the shank or remote from the pivot hole, is that correct? A. Yes.

[81] Q. Now, you referred to the member I hold in my hand now—which drawing is that shown on? A. 42-C.

Q. And you call that what? A. That is Defendants' Exhibit 42-C. That is called the base for the spring.

Q. I now refer to drawing, Defendants' Exhibit 42-B, and what is shown on that?

The Court: Did you say that is the base for the spring?

A. Yes. The bottom end of the spring rests on this base and the surface of the base is shaped so that it fits the end of the spring which curves around here like this (demonstrating).

Q. Mr. Parker, maybe it might be helpful if we would put the base on the fixed member.

The Court: Was that referred to as a washer before?

A. That is the lower or base washer, Your Honor.

Q. (By Mr. Gold) Now, do I have the lower base washer resting on the fixed member with the spring on the washer in about its proper position? A. Yes.

Q. Now, I notice on the base washer there are two depending rounded portions on each side of the hole, and then [82] laterally to that there is a lug that extends down. Where would that lug be positioned when it is mounted on the clip? A. The position behind the spring, which is in the direction toward the pivot. It bears on the top of the fixed part of the clamp for the purpose of preventing the spring from tipping backwards in the operation.

Q. Now, the spring is shown on which drawing, please? A. Defendants' Exhibit 42-E.

Q. Now, in order for the Court to visualize, maybe we can put this in here. Now then, we had another drawing of a pin, I believe you said. That was this drawing? A. Defendants' Exhibit 42-I. That is the pivot pin, it is inserted in this hole through the lower—

Q. That pin goes through the hole in this link member or pivoted member as we referred to it also? A. Yes.

Q. That series of drawings that we have been referring to were the prints that were attached to Mr. Bopf's letter of January 4, 1954, is that correct? A. I presume that is correct, yes.

Q. Now, will you turn to the next letter in Defendants' Exhibit 32 and tell what that is. A. Letter dated January 28, 1954, from Mr. Johnson to Mr. Bopf, transmitting the patent application which was [83] drawn on our design which we have been discussing.

Q. Now, the next sheet in Defendants' Exhibit 32. A. The reason for transmitting it, the application, was to have it signed by the inventor.

The next sheet is a record of invention, we call it, which gives the various dates on which the invention was conceived and first drawn up in a sketch, first written up in a description, to whom it was first explained, and the description of it, date of the first field test and the first photographs and the first model, the first full sized device.

Now, this is a form that we send along with each patent application and ask the inventor to fill it out, so that in case we ever need to know these various dates in the future we will have them all on one piece of paper.

Q. You did file an application for a patent on Mr. Hunter's design? A. Yes.

Q. Any patent issued on that application? A. Yes. It was No. 2,777,378.

Q. Mr. Parker, I hand you now a soft copy of the Hunter patent which has been marked as Defendants' Exhibit 44. Is that the patent that matured from the application that you filed? [84] A. Yes.

Q. Now, will you turn to the next item in the Defendants' Exhibit 32 and tell what that is. A. It is a letter of transmittal from Mr. Bopf to Mr. Johnson dated January 29th, returning the application duly executed.

Q. Tell us what is the next letter in Defendants' Exhibit 32, Mr. Parker. A. Letter from Mr. Johnson to the Commissioner of Patents in Washington transmitting the application, patent application of Mr. Hunter.

Q. And the next item? A. The next item is a letter from Mr. Johnson to Mr. Kirby, the cashier of Deere & Company, asking for a check for $33 to send to the Commissioner of Patents with the application.

Q. And the next item? A. The next letter is a copy of Mr. Johnson's letter to the Commissioner of Patents. We send a copy of that letter to go along with the assignment of the invention and the application to Deere & Company, because the Patent Office requires a separate letter of transmittal with every paper that is filed in the Patent Office.

The next is a receipt—

* * *

[85] A. This is a receipt by the Patent Office of the assignment. Yes, it is of the assignment itself.

Q. (By Mr. Gold) And the next item? A. It is a letter dated February 12th from Mr. Johnson to Mr. Bopf, transmitting a copy of the Hunter patent application.

Q. The next item I believe was included in the group that we made copies of at the deposition, and in that deposition was identified as Parker Exhibit 2-J, is that correct? A. Yes.

Q. Tell us what that is. A. This is a memorandum that was made after one of the executives of the Jeoffroy Manufacturing Company had, in a conversation with Mr. Ralph Mason, one of our executives, indicated that his attorney could tell us why he thinks that our clamp construction infringes this Graham patent. This is rather a mystery because we have never been able to find out who that attorney was and the only one that it could be is Mr. Morris [86] here, but he didn't say anything, so I think it may have just been Mr. Jeoffroy's opinion rather than some attorney's opinion. But the purpose of the memorandum was—I asked Mr. Johnson to review all of his notes and opinions as to validity and see if he sees any reason to change his mind as to the question of infringement. He studied the matter over from start to finish and his conclusion was that our design of clamp did not infringe the Graham patent, therefore he thought it must be some other patent that was pos-

sibly referred to, and such as the Graham No. 811 patent, which was held valid and infringed in the Jeoffroy suit, the suit against Jeoffroy. So then he studied the 811 patent again to review his analysis, and he decides that that is not infringed either. So we just decided that there must be some mistake either as to the patent or the structure that was rumored to infringe this Graham patent.

Q. He didn't say in that memorandum that he had decided there must be some mistake there? A. No, I said that. Let's see, I don't know. Maybe he did. I was just giving that as my opinion, based on the recollection of the facts at the time. We were so confident of that opinion that we didn't even try to follow up to find out who it was that made the [87] statement in the first place, if there was any. You see, this came third-or fourth-hand, somebody told Jeoffroy in talking with Ralph Mason who told Mr. Bopf about it, and Mr. Bopf just mentioned it to me in a conversation, and—well, I was always very much interested in avoiding other people's inventions, we don't want to infringe them, and their patents, so if there is ever any doubt about it we give it our most careful attention.

Q. And here you were indicating in this memorandum you were relying entirely on the difference in the stop contacting faces to distinguish and see that there was no infringement, is that right? A. Well, not entirely. There is over a page of opinion here. It might be difficult to sum it up in just a few words, but the paper is in evidence here, so unless you ask me to I will just let it go at that.

Q. Regardless of the memorandum, relating to the Graham 811 at the top? A. Yes, the bottom two paragraphs.

Q. Turn to the next item in Exhibit No. 32 and tell us what that is. A. It is a letter dated July 12, 1954, from Roger Johnson to Ed Bopf. At that time we were wondering whether it would be worthwhile to file a Canadian patent [88] application corresponding to this United States Hunter patent application.

Q. And the next letter in Defendants' Exhibit 32? A. Letter from Bopf back to Johnson, dated July 14th.

Q. Also relating to the Hunter application? A. Yes, but he advises filing a Canadian application.

Q. And the next letter in the exhibit? A. That is a letter from Mr. Johnson to Mr. Dawson, the manager of our factory at Welland, Ontario, in which it was customary for us to notify our factory up in Canada as to whether or not we decided to file a patent application in Canada corresponding to each United States patent application. In some cases we did file it and we told them that we were going to, and in other cases we told them why we did not intend to file one and give him an opportunity to suggest a different course of action.

Q. Tell us what the next letter is. Is that just a consent to Mr. Dawson— A. Consent to Mr. Dawson to file the application in Canada.

Q. Dated July 21, 1954? A. Yes.

Q. And the next item? A. The next item is a memorandum from Mr. Johnson, dated [89] July 27, 1955, regarding a telephone call from a Mr. Ray Dowdall of Minneapolis-Moline Company, asking whether or not we had a Canadian patent on this clamp.

Q. And the next letter? A. November 21, 1956, from me to Mr. Kirby, our cashier, asking him for a check to the Commissioner of Patents to pay the final fees on four applications which had been allowed, one of them being the Hunter application on the spring cushioned clamp.

Then we have the receipt from the Patent Office giving us the number of the patent that was to issue, and the date on which it would issue. They sent us that after they received the final fee from us.

Q. The next letter? A. The next letter is dated February 18, 1957, from Mr. Bopf to Mr. Murray.

Q. That is relative to the marking— A. The patent marking.

Q. Of the Hunter patent? A. Yes.

Q. Now we have gone through the letters that related to the design and opinions relative to the Deere 650 spring clamp, is that correct? A. Yes.

Q. Mr. Parker, I show you Defendants' Exhibit 34-A. I [90] believe that is the drawing that you said Mr. Johnson placed some green markings on the surface, is that correct? A. Yes.

Q. I show you assembly drawing, Defendants' Exhibit 33-D. That was the assembly drawing of the original spring clamp that was submitted for opinion, was it not? A. Yes.

Q. There was a plate member over the shank and the plate member was pivoted? A. Yes.

Q. That plate member is designated with the numeral 25? A. Yes. That is the pivoted member that I have referred to before.

Q. And when this pivoted member was urged upwardly by the coil springs, that plate member contacted the face, the lower face of the fixed member and that lower face would be marked green on Defendants' Exhibit 34-A, is that right? A. Yes.

Q. And that served as a stop to position the lower end of the chisel or the tool, so it would have the proper suction? A. Yes, that is right.

Q. And the suggested change that was made actually [91] consisted of what, if you were going to apply it to this drawing, Defendants' Exhibit 34-A? A. Well, it was to move the stop to some other position. This is what we considered covered by the patent, Graham patent, the lower face of the fixed clamp member contacting the face of the pivoted member. So we just moved the stop so that it would not—not only wouldn't contact between those two faces, but it wouldn't even contact between those two members.

Q. You actually cut the end of the plate off a little bit and put a lug on the fixed member so the lug would engage the frame of the shank to form the stop, is that right? A. Yes, put the stop between the top of the tool shank itself and the fixed member.

Q. So that when it was urged upwardly by the spring the forward end of the shank would have the same position as it had when it was used with a structure such as was shown in Defendants' Exhibit 34-A, is that right? A. Well, yes, all spring clamps have stops. We considered this patent just to cover the particular arrangement that was shown in the patent.

Q. So your entire distinction in the opinions you were relying on later was the fact that you cut off the end of this plate, of this hinge member right here so as to [92] expose the upper face of the shank and put a lug on the fixed member to engage that shank? A. Well, that was one of the points of distinction, yes.

Q. Were there any other points of distinction? A. Yes, there was something—there was another limitation in the claim about the stirrup member back of the—

Q. There wasn't such a limitation in Claim 1 of the 798 patent, was there? A. No, perhaps that was in Claim 2.

Q. Claim 2 is not asserted by the plaintiff in this action, is it? A. No, not as against the 650.

Q That is right, as to this structure Claim 2 is not asserted as to this one? A. No.

Q. The lug you placed on the fixed member is the lug at the forward end that I have my finger on, is it not? A. Yes.

Q. And that extends down in front of the hinge member and contacts the end of the shank? A. Yes. It doesn't touch the pivoted member at all.

Q. In making that change you didn't alter the normal position of the shank at all, when it is moved upwardly by the springs and comes to its stopped position, is that right? [93] A. Well, I would say that it is an improvement.

Q. Does it change the position of the shank? A. It changes it in that there isn't the amount of variation that there would be if the two cast faces came together, or that there could be, that is, gauging right on the tool shank itself, which is a piece of smooth steel.

Q. The stop is a cast— A. The stop is a relatively small area which can be made much more accurately than the complete top face of a pivoted member, yes.

Q. Do you machine the stop to an accurate dimension? A. No, I don't believe it is ordinarily necessary. It can be cast accurately enough to—

Q. You don't have any difficulty casting it accurately at all, do you? A. Well, I don't know.

Q. Now, Mr. Parker, after a few years there was another design of clamp submitted to your office, was there not? A. Yes. That was submitted with this letter of April 29, 1958, from Mr. Bopf to Mr. W. A. Murray, of our department.

Q. And some additional drawings were submitted with that letter? [94] A. He sent us a drawing and asked if that avoided infringement of the Graham patent.

Q. If I am not mistaken, weren't there two drawings submitted with the letter, Mr. Parker, and would they be Defendants' Exhibit 45-A and 45-B? A. Yes.

Q. Will you tell us what is shown on those respective exhibits? A. 45-A is a—that is a drawing of the fixed member. Well, it is just half of the fixed member. It is the part on which the springs are mounted in this case, this clamp is for a larger frame beam. It is a hollow—square hollow beam rather than a solid frame, and the fixed part of the clamp is in several parts rather than just two parts as in the 650.

Now, Defendants' Exhibit 45-B is the pivoted member of the clamp.

Q. These are the drawings that were submitted to you for an opinion and this is similar to the structure that later was manufactured under the designation of Deere 100 series spring clamp? A. Yes.

Q. Mr. Parker, I have now placed on the table a clamp that has been identified as Defendants' Exhibit 27-A. That is the commercial product that resulted from the [95] original work and design that was submitted on your drawings, Defendants' Exhibits 45-A and 45-B, after the device was modified? A. Yes, after it was cleared—after we cleared it for production and decided that it would not infringe the patent.

Q. Now, as to the structure shown in Defendants' Exhibit 45-A, you say that shows the forward half of the fixed member. That is the portion on which the springs are sitting? A. Yes.

Q. Now, at the other end, other side of the square tube frame is a part clamped to that forward portion and they together with the bolts make up the fixed member? A. That is right.

Q. There was no change made in the rear portion of the fixed member, was there? A. No change from what?

Q. From what was originally designed, it is not shown on either one of those drawings? A. No, I don't recall that there was.

Q. You were concerned primarily with what was in the forward part of the clamp, weren't you? A. Yes.

Q. Now, when you received those drawings, what was done? [96] Did you give an opinion? A. Yes. We received the drawings with this letter from Mr. Bopf, but he had already modified the drawings in pencil, because he anticipated that we would be concerned with the infringement of the Graham patent the way it stood—the way it was originally drawn, because we had pointed out to him that we should not use the type of stop or even we should not use the type of stop claimed in the drawing, nor should we have a stop between the same two members that were used by Mr. Graham in his design. Therefore, while the stop shown in the drawing was quite different than Mr. Graham's design, it still contacted between the pivoted member of the clamp and the fixed member of the clamp, in a way that could be considered an infringement, and Mr. Bopf recognized that himself and so in his letter he pointed out that he himself had suggested these changes to place the stop between the hinge member of the clamp and the frame bar, rather than between the hinged and fixed members of the clamp.

Q. Did Mr. Murray of your office write an opinion in response to that letter? A. Yes, he wrote an opinion dated the 7th, in answer to Mr. Bopf.

[97] Q. Did he attach a memorandum to that letter? A. Yes, he did.

Q. The memorandum consists of two pages and also a third page listing some other patents, is that right? A. Yes.

Q. Now, referring to Defendants' Exhibit 45-B, the pencil marks that you say were made by Mr. Bopf was to remove a little material from the forward end of this hinge member and place a little material on the intermedi-

ate part, is that right? A. Yes. By so doing he changed the stop members—

Mr. Fishburn: Just a moment. I think the witness should answer the question.

Q. (By Mr. Gold) Now then, that is exactly what was done and in making the clamp that is shown on Defendants' Exhibit 46? A. Yes.

Q. The metal that was removed, according to Mr. Bopf's suggestion, was at the forward end of the hinge member so it would not contact the part of the fixed member under the springs, is that right? A. That is right.

Q. And the metal that was added was added immediately under the box frame so the hinge member would contact the box spring? [98] A. Yes.

Q. This fixed clamp that you refer to is rigidly fastened to the box frame by three bolts, is it not? A. Let's see, I think it is three. Yes.

Q. Two bolts underneath the box frame and one on top? A. Yes.

Q. So that the fixed member is just—when we call it a fixed member, we mean it is tight and remains stationary to the frame? A. Yes.

Q. So your change from what Mr. Murray said would be an infringement was to move the contact between the two faces that were fixed—I mean between a face of the hinge member and a face of this fixed member, to another face of the hinge member and to a part that was fixed to the fixed member? A. That is right, that is what was considered not an infringement.

Q. And your intention in making that change was still to keep the same position of the shank when it was up in its upper or normal position, urged upwardly so the top faces were in contact, was it not? A. Well, yes. All clamps, Mr. Graham's and everybody else's design, have stop members and our point was to not use Mr. Graham's design or anything that would [99] infringe his patent.

Q. And making that change of taking the metal off at the forward end of the hinge member and putting it down under the frame did not change the location of the shank at all when it was in its upper position, isn't that right?

That shank remained the same in both instances? A. Oh, yes.

Q. Mr. Parker, the Patent Office Gazette each week carries notices relative to any patent litigation that is pending or that has been determined in some way, it carries notices of all patent litigation, does it not? A. It is supposed to. I have found there are instances where I haven't seen any notice, but there has been a suit. But that is the way it is supposed to work.

Q. In most instances when a patent suit is filed there is a notice within a few months in the Patent Office Gazette, is that right, sir? A. Yes.

Q. And when there is a decision in any patent litigation, it is usually reported in what they call United States Patent Quarterlies, is it not? A. Yes.

Q. That is a reporter system similar to the Federal Reporter? A. That is right.

[100] Q. Your patent department has received copies of a Patent Quarterly? A. Yes, we subscribe to that.

Q. And the advance sheets? A. Yes.

Q. Do your attorneys read those advance sheets? A. Yes, we all try to read them. I don't say we have time to read all of them, but we would like to.

Q. If you note a decision relative to an agricultural implement, you would probably note it and everyone would read it, would they not? A. We would be more interested in that than we would in any other kind, of course.

Q. You knew about the Graham and Jeoffroy litigation? A. Yes.

Q. In fact, you knew about it back about the time that Mr. Hunter first started working on the design that we have been referring to that accumulated into the 650 suit, is that right? A. Yes, we knew about it almost from the time it started.

Q. And you particularly noted it when the Graham 798 patent was held out as infringed by the Court of Appeals of the Fifth Circuit? A. Yes.

Q. Mr. Parker, when Deere & Company start to be interested [101] in producing some equipment or changing

their equipment, do they have an investigation made in the field, some kind of a survey? A. Usually do.

Q. Are those surveys sent to you? A. No.

Q. You don't receive copies of them? A. No. They are making—well, some of them are not formal surveys. The demand for any particular implement or improvement usually comes in the form of either complaints or suggestions from our customers that they want certain things and they make those to their dealers and the dealers forward them to the branch house and the branch houses forward them on to the factories. Then we have a product research department that follows—several members of that department that follow the conventions, the meetings on various agricultural subjects and go to the experimental stations of the government, the universities, to keep apprised of any new ideas that are coming out and so sometimes a suggestion that we need a certain implement would come from the product research department, sometimes from the sales department.

Q. If it is new equipment of a competitor that is operating in the field, do you have people go out and observe it [102] to find out what it will do? A. Yes, both our engineers and our product research men are always interested in seeing any competitive equipment either on the dealer's floor or in the field.

Q. Do you know what type of chisel plow Deere & Company was selling in South Dakota and Montana prior to the 650 series? A. Yes, we had a number 600 series and a 900 series, which had other forms of springs between the tools and the frame.

Q. Is that spring a coil in the shank itself that we might call a pigtail? A. Yes.

Q. That is the only spring that you would have as far as any spring between the tool and the frame, prior to the 650 series? A. Yes.

Q. Is the term pigtail a proper, well known name describing the type of spring shanks that you were using in your 600 series or 900 series? A. It is one term you can use. I hadn't heard of that particular term until lately, but I presume that the engineers would have known about it.

Q. The shank comes back from the frame and then makes two turns, then comes down to the lower end of the tool [103] it is mounted on? A. Yes.

Q. And the forward end of that shank is fixed tight to the spring by some clamp, there is no spring in the clamp at all? A. Yes.

* * *

Q. (By Mr. Gold) Mr. Parker, when we took the depositions in Moline, we had some surveys produced. Did you receive copies of those surveys? A. Yes.

Q. Did you receive them back at the time they were made? A. No. No, those were surveys made by the product research department, and I hadn't seen them until just recently.

Q. Until about the time of the depositions? A. Yes.

Q. Mr. Hunter brought those with him? A. No, they were found in the product research files.

Q. In Moline? A. In Moline, yes.

Mr. Gold: If Your Honor please, these are the originals of the exhibits that were in the Hunter [104] deposition, Hunter Exhibits 1 and 2.

Q. Mr. Parker, I hand you a document which has been marked for identification as Defendants' Exhibit 30. I believe on that it shows "Hunter Exhibit 1," is that correct? A. Yes.

Q. Can you tell me what that is? A. It is entitled "Tool Carriers Survey" by E. H. Lee, March 1953, Product Research Department copy.

Q. Is that a survey made by the Deere & Company employees for the employees of their subsidiaries? A. Mr. Lee is a Deere & Company employee in the Product Research Department at Moline.

Q. And this document came from the files of the Deere & Company in Moline? A. Yes.

Q. Can you tell us when that survey was made? A. Well, the survey, the trip that was reported by this report was made by Mr. Lee March 9th to 19th, 1953, and he wrote up the report on March 30th of 1953.

Q. I believe the survey shows that he traveled with some other people from the Kansas City branch, is that correct? A. Yes.

Q. Those people—I believe it is Mr. Sheier, Mr. Waln, [105] and Mr. Wilson. Were they employees of Deere & Company or the John Deere Company of Kansas City? A. John Deere Company of Kansas City.

Q. A subsidiary of Deere & Company? A. Yes.

Q. Now, if you will look at the other survey, I believe it has been marked as Defendants' Exhibit 31. Will you tell us when that was made and by whom? A. That is another tool carrier survey made by the same man, Everett H. Lee, in the Product Research Department, was made April 6th to 16, 1953, and this report was written April 17th.

Q. That report also came from the files of Deere & Company in Moline? A. Yes.

Q. Were both of those surveys relative to what we would call chisel plows? A. Yes, that is one of the subjects covered. The tool carrier as a whole is covered.

Q. Going back to the Deere clamp, Exhibit 27-A, that is the Deere 100 series, I believe, is it not? A. Yes.

Q. I notice that at the rear of the hinge member there is a plate and some bolts with the plate underneath the shank, is that correct? [106] A. Yes.

Q. The bolts and the plate, with the portion of the hinge member over the shank, embraces the shank, does it not? A. Yes.

Q. You are familiar with the Jeoffroy clamp, are you not? A. Yes, to some extent, I will add.

Q. Mr. Parker, I show you now what has been marked as Plaintiff's Exhibit E. Do you know whether or not that is a Jeoffroy clamp? You may step over here. A. I think it is a Jeoffroy clamp.

Mr. Fishburn: It is so stipulated in the stipulation, Your Honor.

Mr. Morris: No question about it, Your Honor.

Mr. Gold: I want to be sure that this witness knows it is a Jeoffroy clamp, Your Honor, of his own knowledge.

Q. (By Mr. Gold) You have seen such clamps as this, Mr. Parker? A. Yes.

Q. Now, if you will look, is there a plate and bolts under the shank so that the plate and bolts and the portion of the hinge member immediately above embrace the shank at the rear of the frame? A. Yes.

Q. Do you know that this device was held in contempt in [107] the contempt action, Graham versus Jeoffroy? A. One was. I am not familiar enough with the details to be able to pick out which is which.

Q. I show you what has been identified as Plaintiffs' Exhibit D. Do you know that that is a hinge member and a portion of a shank from a Jeoffroy clamp? A. I presume it is. It is so marked.

Q. It has a loop portion around the shank at the rear of the hinge member with a set screw, does it not? A. Yes.

Q. Do you know that that was also a clamp that was held to be under the claims in the contempt action in Graham versus Jeoffroy? A. I know that there was one so held.

Q. I now show you what has been marked as Plaintiffs' Exhibit C. Do you know that that is also a Jeoffroy clamp? A. Yes, I think it is.

Q. It has a loop portion under the shank at the rear of the clamp, does it not? A. Yes.

Q. This tag shows it is HT-5 Jeoffroy clamp, does it not? A. Yes.

Q. Do you know that that was the clamp held to infringe the Graham 798 patent in the suit upon that patent? [108] A. I can't distinguish between them. I have read the opinions of the Court in each case, but the opinion does not show the details—there is no drawing in the opinion and I have a rather sketchy knowledge, not enough to testify to under oath.

* * *

[110] Plaintiffs Exhibits D-1 and E-1 marked.

[111] Cross-Examination by Mr. Morris.

Q. Mr. Parker, I may be the only one in the courtroom that missed this awhile ago, but I didn't hear any testimony as to the drawing, Defendants' Exhibit 46. Is

that drawing a blueprint of the final production model of the Deere 100 series spring clamp? A. Yes. At least that shows the model that we first went into production on.

Q. All right. Was that the device after the modifications had been made upon the structure as shown in Defendants' Exhibits 45-A and 45-B? A. Yes, the new drawing includes those changes.

Q. The new drawing, Defendants' Exhibit 46, includes the suggested changes as shown in pencil on Defendants' Exhibit 45, which was the original drawing? A. Yes.

Q. All right. I believe that is all the questions I will ask of this witness at this point.

I may recall him as a witness on defendants' case.

(Witness excused.)

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[112] GEORGE DWIGHT HUNTER, called as a witness on behalf of the plaintiffs, was duly sworn and testified as follows:

Direct Examination by Mr. Gold.

Q. Mr. Hunter, will you state your name, please. A. George Dwight Hunter.

Q. How o'. are you? A. 45.

Q. What is your address? A. 1531 70th Street, Des Moines, Iowa.

Q. What is your occupation? A. Products engineer.

Q. By whom are you employed? A. John Deere Des Moines Works.

Q. That is a manfacturing plant of Deere & Company? A. Yes.

Q. What are your duties in connection with your position? A. I am supervisor of a group of men that are engaged in the design and development of tillage tools.

Q. When you refer to tillage tools what do you mean? A. Specifically, we are engaged in the design and development of tool carriers, tool bars, row crop cultivators.

Q. And chisel plows? A. The term chisel plow is I believe what we call a tool [113] carrier.

Q. How long have you had your position as supervisor of your group? A. Since November 1, 1961.

Q. And your position prior to that time? A. I was a project engineer.

Q. When you say a project engineer, will you tell us a little more specifically what you mean. A. As project engineer I was supervisor of a smaller group of men engaged in much the same kind of work but in a smaller scope.

Q. What is your educational background? A. I am a graduate engineer from Iowa State College, and I have a liberal arts degree from the University of Iowa.

Q. In what year did you get your engineering degree? A. 1950.

Q. And for whom did you go to work after you graduated? A. John Deere Des Moines Works.

Q. And that has been your only employment since you have been out of college? A. Yes, sir.

Q. What was your first position with the Deere Des Moines Works? A. I started as a student engineer.

[114] Q. And what were your duties? A. I was engaged in design and development of corn harvesting equipment.

Q. And what was your next work? A. I then went to the tillage section.

Q. And you have been in the tillage section ever since? A. Yes.

Q. Would you say now you are in charge of the tillage section? A. Yes.

Q. Approximately what year did you start in the tillage section? A. Fall of 1950.

Q. You made reference to the tool bars when I asked about chisel plows. Can you be more explicit as to the meaning of tool bars? A. We refer to the tool bar as an integral machine, one that is integral with the tractor, three point hitch or similar device.

Q. And in that tool bar, would that be a bar section something on the order of this square bar that is in this hinge member, 650 series? A. Yes.

Q. I believe Mr. Parker referred to a 600 series and 900 series. They were tool bars, were they not? [115] A. They were what we refer to as tool carriers.

Q. Now will you distinguish between a tool bar and a tool carrier? A. Tool carrier is a drawn type machine, has its own carrying engaging wheels.

Q. And do I understand that a tool bar would be something that would be connected directly to the tractor and possibly—or tractor lift that could be raised and lowered from the tractor to do the tillage work? A. Yes, that is correct.

Q. Would have no ground engaging wheels? A. Normally not. It would be engaged by the tractor wheels.

Q. And the tool carrier would be what you might call a pull type? A. That is right.

Q. The tool carrier would have square bars similar to the one we have mentioned a moment ago on this fixed member that would be secured together to form a kind of a frame? A. It could have a square bar or an equivalent member to perform what the square bar would do.

Q. Back prior to 1953 did you have any other shaped bars on your tool carriers? A. No, ours were square bars.

Q. All square? [116] A. Yes.

Q. Now, the 100 series has a tubular member and that would be a part of a tool carrier? A. Yes.

Q. It makes up a frame for mounting these clamps of the plows, does it not? A. Yes.

Q. In your work in 1952 did you go out in the field to observe equipment and its operation? A. Yes.

Q. Particularly tillage tools? A. Yes, as I was primarily concerned with the design of tillage tools that was my primary object.

Q. What would be the occasion of those trips that you would make? For what purpose would the trip generally be made? A. A trip of that kind would usually be made to call on our dealers and branch house people to determine the adequacy of our tools, how they were performing, if they were doing what was intended.

Q. And your dealers would tell you about the competitive items in the field? A. Yes, we would be also interested in competitors' tools.

Q. And if there was any new equipment in the area of a [117] competitor you would probably go see it, would you not? A. There is a possibility I would, yes.

Q. If it was close by so you could you would do that, wouldn't you? A. Well, if the occasion was such that we could we probably would.

Q. Did you see a Graham spring clamp plow in 1952 and 1953 in your trips? A. Yes, I have seen them.

Q. Had you also seen the Jeoffroy plows? A. Yes.

Q. In what areas would you travel? A. What period are we referring to?

Q. Still in 1952, 1953, that period. A. At that time I was primarily interested in tillage tools used in wheat producing areas. As a consequence my trips were into those areas.

Q. That would be all the way from Texas to in Canada in the wheat area? A. Wherever wheat was grown, yes.

Q. And that would include what we call the rocky territory? A. Yes, there would be rocky territory included.

Q. Actually, Colorado is also rocky territory, is it not, farm areas? A. The only portion of Colorado I have been in was the [118] extreme east portion adjoining Kansas and I don't recall rocks in that area.

Q. Do you know about Arkansas? A. I haven't traveled Arkansas.

Q. Montana, South Dakota, those areas would be called rocky territory? A. My experience in those states is that there are areas of both kinds, rock free and some with rocks.

Q. In the rock free the farmer has probably cleaned the rocks off of his farm through the years? A. I believe there are areas that didn't have rocks to be cleaned off, but there is evidence of rocks being cleaned off. You see rock piles in some areas.

Q. Quite frequently you see the rock piles? A. In some areas, yes.

Q. Some of those rocks are quite large, are they not? A. Varying sizes, yes.

Q. And some would be buried under the ground and would be uncovered as the farmer was tilling his soil or found when he was tilling his soil? A. I assume that there would still be some there, yes.

Q. Now, this 600 series and the 900 series, did they differ as to the tools or shanks that would be connected to the bars? A. As I recall, we used the same ground working tools on [119] both machines.

Q. Mr. Hunter, I have a photostat of an exhibit that was marked Exhibit A in connection with some interrogatories in this case, and I show you an illustration of the 900 series. Is that a proper illustration? A. Yes, that seems to be.

Q. Does that have a coil in the shank of the ground working tool? A. Yes.

Q. That coil is about two complete circles, is it not? A. Yes, approximately two turns.

Q. And the forward end is fastened by a rigid clamp to a square bar? A. That is correct.

Q. And that particular illustration is one of what you would call the pull or drawn series? A. Yes, that is our 900 series tool.

Q. And is that type of coil in the shank the device that you were using to support chisels in plowing prior to the development of the 650 series spring clamp? A. That is one of the kind of standards, yes.

Q. That was the only kind that had any spring action, wasn't it? A. Yes.

Q. And that is the same thing that you used on the 600 [120] series? A. Those were used on the 600 series, yes.

* * *

(Plaintiffs' Exhibit K was marked for identification.)

Q. (By Mr. Gold) Mr. Hunter, I now show you the photostat of the bulletin that we were just discussing, and which is now marked Plaintiffs' Exhibit K, is it not? A. Yes.

Q. That is the one that shows a coil in the shank on the 900 series? A. Yes.

Q. You also had tools that would be mounted on what you might call a flat spring shank that the forward end of the shank was fastened with a rigid clamp to the bar, is that right? A. For the 900?

[121] Q. Yes, sir. A. No, we didn't have flat springs on the 900.

Q. Did you have them on the 600 series? A. No.

Q. Then the only shank type that you would have would be that coil shank on the 600? A. In addition to the coil shank that you referred to we had stiff standards and standards for mounting 30-inch sweeps.

Q. Now, a stiff standard, would that go almost directly vertically down from the bar, the frame bar? A. There were two types, a front type and a rear type. The front type went, as you described, almost vertically down from the bar. The rear type extended rearwardly from the bar and then curved downward.

Q. Both were rigid and were not intended to have any spring action? A. That is right.

Q. Did you have any difficulty with your tillage tools in the rocky territories of the country? A. I am not sure as I understand what you mean by difficulty, sir.

Q. Did you have any breakage? A. There would be occasional breakage.

Q. Do you have any bending of frames or bars? [122] A. Not that I recall.

Q. Do you have any cases where those—what I call pigtail shanks were straightened out to some extent? A. If they were used in improper manner, there were occasions when they would bend, yes.

Q. Your sales that year of tillage tools that you had as far as the chisel type devices that you had in '52 and early '53 had fallen considerably, hadn't they? A. I haven't any knowledge of the sales volume.

Q. Do you know whether or not the dealers were giving you resistance to those types of devices? A. No, sir.

Q. Did you receive survey reports made by Mr. Lee before you started your development of the 650 series of

spring clamps? A. I recall Mr. Lee's reports, but as to timing, whether I saw those at the time I started or soon after I don't recall.

Q. But you were given those reports about the time you were assigned the job of designing what ended being the 650 series? A. I was given the opportunity to see them, to read them, yes.

Q. Within a month or two of the assignment of the job? A. Before or after? It was about the time I started as [123] I can recall, yes.

Q. If a farmer using one of your 600 or 900 series devices with chisels on them ran into rocks, would that be abusive use? A. Not if he had the coil springs, what you have referred to as the pigtail standards, they were intended to work in some rocky conditions.

Q. In fact, that is the only thing your company had to offer for use in rocky farms, is it not? A. At that time it was, yes.

Q. Approximately when were you given the assignment to develop a new tillage tool clamp, personally? A. As I recall it would have been the spring of 1953.

Q. I show you what has been marked for identification as Defendants' Exhibit 30. Can you tell us what that is and the date of it? A. This is titled "No. 600 Tool Carrier Survey, Kansas City Branch, March 9 to 19, 1953." There is a date in the upper right-hand corner, March 30, 1953, with the initials, "E. H. L." under the date.

Q. I show you the Defendants' Exhibit 31. Can you give the date of that report? A. This date is indicated as April 17, 1953.

Q. And you would have been assigned the new development of a tool mounting about—somewhere around those dates [124] of those reports? A. It would have been somewhere around that, I don't know how soon. Possibly within a month or two.

Q. And you were handed each of these reports, Defendants' Exhibits 30 and 31, near the time you started your assignment? A. I don't recall specifically the handing of them to me, but I apparently had them near that time.

Q. Did those reports make any suggestion as to the design of a new device? A. I don't believe there was any

specific suggestion. It was more a report of this man's conversation and findings as he traveled these different areas, called on our dealers.

Q. And it would include information that would be helpful to you in your consideration of the subject of a new design? A. Such a report would probably not have very much specific help for a design problem. That would be of a general nature that would be used more to decide policy probably.

Q. You would be familiar with the problems in the field from your own trips that you wouldn't need any outside suggestions as to what to build? A. Well, we are glad to get suggestions wherever they [125] come from. But of course we—our field trips are our biggest source, and suggestions by anyone are listened to.

Q. Knowledge of what is being used in the field also helps out, does it not? A. Yes, that is part of our business.

Q. Now then, after you were assigned the new project of a new mounting for the chisel, what did you do? A. You mean my specific actions or—you mean what was the next step in our development?

Q. Yes, sir. A. We proceeded to investigate and consider different ways of providing a standard with a cushion spring mounting.

Q. Prior to your development of the 650 series spring clamp did Deere have a Graham spring clamp or a Jeoffroy spring clamp? A. As I recall, we had a Graham clamp assembly, but not a Jeoffroy.

Q. You have had a Jeoffroy spring clamp since the development of the 650, haven't you? A. We had a Jeoffroy spring clamp, oh, probably as late as 1959.

Q. About the time you developed your 100 series? A. No, sir, it was after the 100.

[126] Q. Would you say it was about that time? A. No, sir, it was definitely after the 100 was developed.

Q. Have you checked that since you gave your deposition in Moline? A. I have.

Q. Can you tell us the date that you received the Jeoffroy clamp? A. It was during the winter of 1959-60.

Now, whether it was December of '59 or January of '60 I don't recall.

Q. That was the first Jeoffroy clamp you had had at the Des Moines plant? A. That is correct

Q. You had seen Jeoffroy clamps though in the field, I believe you stated earlier, prior to 1953? A. Yes.

Q. Mr. Hunter, I believe in Moline, you stated that you had not been able to find any preliminary pencil sketches or rough sketches of the device that you worked out in 1953? A. That is correct.

Q. The first drawings you were able to find were produced there at Moline, and are those the drawings I have put before you? A. Yes, these are the first.

Q. Those are Defendants' Exhibits 33-A and 33-B, are they [127] not? A. Yes.

Q. Those were the drawings that you sent to Mr. Parker for an opinion? A. Yes.

Q. Or I guess Mr. Bopf sent them? A. He forwarded them to Mr. Parker, yes.

Q. Who is Mr. Bopf? A. He is our chief product engineer.

Q. And was at that time? A. Yes.

Q. As an engineer assigned to a project, you would have access to any materials in the engineering department at Des Moines, would you not? A. Yes.

Q. Anything you might have in your library? A. Yes.

Q. You would be familiar with a file of patents that were there on tillage tools? A. Familiar? I am not sure I understand the meaning of the word familiar.

Q. You knew of the library of copies of patents? A. Yes.

Q. You had gone through them at times? A. Yes.
[128] Q. A copy of the Graham 798 patent was in that library, was it not? A. Yes.

Q. In 1953? A. Yes.

Q. In the spring of 1953, was it not? A. I can't answer that correctly. I am not sure when it would have been there.

Q. Mr. Hunter, can you refer to Defendants' Exhibit 33-B and tell us the parts of the clamp and how it would operate in plowing, and particularly when it would hit a rock or other obstruction, when the chisel would hit a rock? A. We have a fixed member fastened to the tool bar—

Q. I believe there are numbers on it, Mr. Hunter, circled in red with arrows. If you can refer to those numbers it might help show up in the record. A. The bottom half of the fixed member.

Q. Now, Mr. Hunter, we have placed the Defendants' Exhibit 33-B on the easel. Would you care to step down and point to the parts as you describe them. A. This clamp is comprised of a fixed member, the lower half of which is indicated by the number 1, and is this part of the assembly that we see here. The top half is indicated by number 17. These two halves [129] are held together across the frame member by two bolts, number 11 and 12. In the rearward upper portion of the lower half of the fixed member there is a pivot bearing, indicated by number 26, through which pivot pin number 27 is mounted. The pivot pin is held in position by the cotter pins on each end, indicated by number 28 and 29.

In the lower rear corner of the lower half of the fixed member is a member tying the two side plates together, as indicated by item No. 8. The flat spring standard indicated by number 30 is attached to it by—attached at its forward end to the hinge member number 25 by means of a carriage bolt, which is apparently item number 31, the nut on the bolt being item number 36. The hinge member is fastened to the top of the flat spring standard by the bolt, as I mentioned, and in this device the forward upper surface of the hinge member contacts the forward surface of a cut-out portion of each side member. The forward end of the side members are formed inwardly in this cut-out portion so as to reach over and form a stop for the top.

Q. I have now placed Defendants' Exhibit 33-A on the easel. Will that help you to identify those surfaces you were just referring to? [130] A. Yes, I believe it will. These surfaces are shown on the forward end of the side

members, just below the area indicated by number 45. At the forward lower end of the flat spring standard is a retaining clip number 35, which retains the U-bolt. The U-bolt engages the clip which in turn bears against the lower surface of the forward end of the spring standard. The upper end of the U-bolt passes upwardly through two compression springs and has a nut and washer at the top end of the U-bolt to engage the spring.

Q. The upper face of the hinge member 30 at the forward end would engage the lower face of the two members, two forward portions of the side plates that are designated 45 and 46 in the view on the lower righthand corner of Defendants' Exhibit 33-A, is that right? A. That is correct.

Q. That forms a stop surface to stop the upward swinging movement of the shank and the hinge member in response to the urging of the spring? A. Yes.

Q. That would serve as two locating faces to position the tool or the end of the tool with the proper suction in its plowing of the ground? A. That is right, it positions the standard in its proper [131] working position.

Q. Now, if you would strike—if the chisel would strike a rock in the ground, what would be the action that would take place? A. The increased resistance at the bottom end of the flat spring standard would cause the standard and hinge to rotate about the hinged end, the hinging action, which would cause the forward end of the hinge standard and hinge member to move downward and compress the spring, the cushion springs.

Q. That would allow the tool to raise up in the back and tend to clear the obstruction? A. Yes.

Q. Jump over the rock as it raised up? A. Yes.

Q. Now, in normal plowing operations there would be a force on this shank or standard, as you call it, that would tend to force it up against the hinge member at the rear portion of the hinge member, is that right? A. Yes, there is a force to the rear and upward.

Q. That would maintain the standard in contact with that plate of the hinge member? A. Yes.

Q. Now, if you were going to travel from one place to another with the plow, you would raise the frame up

[132] on its ground engaging wheels so that the tool would be out of the ground, would you not? A. That is normally done, yes, sir.

Q. And when you did that wouldn't the shank tend to rest on this pin, number 8, that extends across between the side plates of that fixed member? A. Normally not. The tension of this bolt attaching the standard to the hinge member is normally sufficient to hold the two together so that the spring standard would not be resting on this member tying the two side plates together.

Q. Your drawing shows almost the contact in Defendants' Exhibit 33-B, does it not? A. That shows that as being very close, that is correct, but it is not intended that it carry the standard. That was not its purpose. Its purpose was to tie the two side members together for mutual support in side loading, imposed by the standard into the fixed member, and also to resist the deflection of the spring standard after it had, as you spoke, jumped the rock and rebounded into its working position.

Q. It would serve to support the shank to some extent in a rebound after striking the rock? A. Yes, that could happen.

Q. Now, this member that we call a fixed member with its [133] cap and bolts are supposed to be held tight and immovable relative to that bar of the frame, the square bar, is that right? A. Yes.

Q. After these drawings were sent to the patent department of John Deere, what did you do as the next step in your development? A. The patent department advised us that there was a possibility of infringement with the Graham patents because of the means of positioning our standard in its working position.

Q. And they sent you letters and the drawings that have been marked as Defendants' Exhibits 34-A and 34-B? A. Yes.

Q. Then did you modify your design? A. At about the same time that we were advised of this omission that we had in our first arrangement we decided to go from a fabricated clamp assembly to a cast assembly, and at the time we went to the cast assembly we modified the stop or positioning device.

Q. Mr. Hunter, I am holding up Defendants' Exhibit 38. Is that your next drawing? A. Yes, sir, that is.

Q. Now, will you tell us what changes you made from the structure that is shown in Defendants' Exhibits 33-A [134] and 33-B. A. As you recall, in the 33-A and 33-B Exhibit we had the positioning of the standard accomplished by the upper surface of the hinge member contacting offset portions of the side plates or the fixed member. In this arrangement the hinge member is terminated rearwardly of the forward end of the flat spring standard and the cast lug is incorporated in the fixed member to contact the forward end of the spring standard directly and thus position the standard in its proper position.

Q. Now, the standard itself was not changed at any angle or relation to the horizontal between the structures shown in Defendants' Exhibit 38 and that one in Defendants' Exhibit 33-B, was it? A. Parts were adjusted in their size and proportion to hold this standard in its proper working position.

Q. So that the tool on the lower end of the standard or shank would be in the same position as you had in the structure that was used in the clamp of Defendants' Exhibit 33-B? A. Yes.

Q. The fixed member and the hinge member were both then designed to be made of castings, is that right? A. Yes, these were cast members here (indicating).

[135] Q. Where in your original model they were made of fabricated sheet steel or plate steel? A. That is right.

Q. It would be an economical manner of making it to cast it rather than to try to weld it up out of plates, wouldn't it? A. There were several advantages of casting over fabricating. Manufacturing difficulties were predicted in this type of an arrangement, and also in this arrangement where we cast we were able to include the stop lug, the dry sand core, which you find in the interior areas of this fixed member, and thus be assured of the proper position of the flat spring standard with respect to the hinge pin at all times.

Q. Whether you had a stop lug on it or not you could still make the inside of that casting out of a dry sand core,

could you not? A. Yes, that requires a very fine quality in the casting.

Q. The very nature of the clamp would require a dry sand core for that channel? A. Areas in there would, yes, certain areas.

Q. Now, we have another drawing, Defendants' Exhibit 39, that I believe that you told us in Moline had a screw or bolt for a stop, is that correct? A. Yes, that has an adjustable device for positioning the [136] standard.

Q. That took the place of a rod that you had in Defendants's Exhibit 38? A. That is correct.

Q. Actually you didn't make any with a bolt for a stop, did you? A. They have not been on the market.

Q. Now, Mr. Hunter, we have placed another drawing, Defendants' Exhibit 41, on the easel. Were there some other modifications made in that one from what you had in Defendants' Exhibit 38? A. Yes, there are some part detail changes. On the rear upper corner of the fixed member we revised that to include a reinforcing rib which completely goes around the rear portion of the fixed member. As you recall in this first device, this rib only went as high as the hinge pin member. Also we revised the means of holding the bolt heads from two lugs as shown on Exhibit 38 to two lugs on each side of the side members to engage the head of the clamp bolts.

Q. Now, the rib you refer to is on this fixed member casting, as I have it in my hand, is it not, at the back? A. Yes, this rib up and over the top portion there. Originally we had it just up to this level (indicating).

[137] Q. That was just a reinforcing rib for strength? A. That is correct.

Q. Now, you referred to some lugs underneath. They are on each side of the bolts in that channel, are they not? A. Yes.

Q. They are merely so that you can put the bolt in place and it won't turn while you screw the nuts down? A. That is correct.

Q. Will you point out the bolt there. A. (Indicating). There is no way of putting a wrench on. It is a hidden head.

Q. Now, those lugs that you have mentioned, Mr. Hunter, were put on merely for convenience of assembly so that you could tighten the nuts on a bolt that had an inaccessible head, is that correct? A. Yes.

Q. Those lugs had no function as far as the operation of the clamp, did they? A. No.

Q. And outside of reinforcing or strength, the rib on the back had no function? A. That is right.

Q. In other words, those changes did not change the operation of the device from what was shown in the [138] other exhibit, Defendants' Exhibit 38? A. That is right.

Q. Now is the commercial device substantially as shown in the drawing, Defendants' Exhibit 41, commercial device being the Deere spring clamp of the 650 series? A. With the exception of minor revision to parts, to primary parts, it is essentially the same.

Q. Now, will you tell us what happens in plowing operations with a clamp of the structure shown in Defendants' Exhibit 41. A. In normal soil conditions of course the cushion spring standards are tightened sufficiently to exert enough upward force to the forward end of the spring standard to hold it against its positioning lugs.

Q. That is the same as was done when the standard in our device as shown in Defendants' Exhibit 33-B would engage the lower face of the side plates of the fixed member? A. Yes, the spring force would hold this against the stop.

Mr. Morris: I believe, Mr. Gold, you said the standard engaged the lower face of the side member and I don't believe you meant that, did you?

Mr. Gold: No. The upper face of the hinge member engages the lower face of the side plates of [139] the fixed member? A. That is correct.

Q. In other words, they were to position the plow in its normal operation for the right suction? A. Yes, that is right. When an immovable object, a rock or a root would be struck with the lower end of the standard, increasing the resistance at the lower end of the standard, it would cause a hinging action of the standard which in turn would tip the forward end of the standard and hinge downward.

I believe this secondary "U" on here shows how that would tip to a lower position on the forward end, thus compressing the cushion springs, and as soon as the obstacle was cleared the energy stored in the cushion springs would return the standard and hinge members to their proper operating position.

Q. You might say the normal position where the stop faces are engaged? A. Yes.

Q. Mr. Hunter, in discussing the structure when you made a casting rather than welded plates, I don't believe we mentioned one part. In the welded structure we had a pin 8 between the side plates that served as a stop on the rebound of the shank after it struck a rock. The fixed member has a portion of the casting, [140] does it not, to do the same thing? A. Yes, we incorporated the same feature in the lower rear corner of the cast fixed member, which is shown on the corner here and as was shown on the drawing. That member would, like you mentioned, restrict the standard on rebound and also tie the two side members together for mutual support.

Q. That is shown actually in a dotted line in both the drawings, Defendants' Exhibits 38 and 41, is it not? A. Yes, it is in both drawings.

Q. Is that the part that is shown in Defendants' Exhibit 38-B in a loop-like part, that is crosshatched, it looks like with pencil, in the lower right-hand figure? A. The crosshatching is misleading. I don't know when or why that was added. This is a view taken right through the "V" that engages the tool bar. See, this vertical line. And the only part that should be crosshatched would be the portions that would run straight down the sides. This member in here would not show on that view. There would only be an outline of this part back there. Have I made myself clear?

Q. Yes. That would be true in your original drawing, but your crosshatching apparently has been added later, has it not? A. Yes, that is penciled on. That wasn't on the original [141] drawing.

Q. Did you pencil those crosshatches— A. No, sir, I don't know when those were put on there or by whom.

The Court: Mr. Gold, I think we may as well recess for the evening. I would like to ask the witness a few questions at this particular stage of the trial.

As I understand the operation of the chisel itself, when it hits a more solid object than the dirt, of course it would tend then to impede the progress of the chisel and that would exert the hinge then on its—would stop the forward progress of the chisel, then the hinge would throw the pressure down on the foward portion of the shank?

A. Yes, sir.

The Court: Which then would be pressed down against the coil springs compressing the springs?

A. Yes, sir.

The Court: And then that would tend to bring it on further up and over the object?

A. Yes, sir.

The Court: And when the object is cleared the coil spring would bring back the shank to its normal position?

[142] A. Yes, sir, that is correct.

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[143] THURSDAY MORNING SESSION, MAY 3, 1962

GEORGE DWIGHT HUNTER, resumed the stand and testified further as follows:

Direct Examination (Continued) by Mr. Gold.

Q. Mr. Hunter, before we recessed in the evening yesterday, the Court asked about the movement of the shank in plowing operations. I have removed the springs from a 650 clamp, and if you will step down here maybe we can demonstrate to the Court exactly what the movement is. The reporter asked us to talk a little louder when we are over here so she can hear us. A. Very well.

Q. Mr. Hunter, I now show you a clamp with a shank that has been identified as Plaintiffs' Exhibit I. That clamp is the Deere 650 series, is it not, without the springs? A. Yes, it is.

Q. I have placed a chisel on the lower end of this shank. That chisel is a Graham chisel. It is not a Deere chisel, is it? A. That isn't John Deere, no.

Q. It would be very similar to a John Deere chisel? A. Yes.

[144] Q. Now, Mr. Hunter, will you demonstrate to the Court the movement that would occur in the plowing operation with the shank and the hinge member. A. In normal operating conditions where the soil is without immovable objects, the standard would be held in this position as shown here by the pressure of the springs transmitted through this U-bolt pulling it against the stop, which is what we call the normal operating position. When the standard, the chisel, would strike an immovable object such as a rock or a root, the additional pressure on the point of the chisel would cause the standard to assume a hinging action, the chisel would move to the rear and upward, in this manner, thus compressing the compression springs, which would be on the upper portion of the U-bolt. After the rock or root was passed over the stored energy in the compression springs would return the standard to its normal operating position, back against the stop and fixed member.

Q. Now, the hinge member and the shank move in unison in that hinging movement? A. The hinge member and the shank would move together, yes.

Q. And in the normal position they are held by the springs against the stop? [145] A. Yes.

* * *

Q. (By Mr. Gold) That would be the same hinging movement that you had in your first model that was shown in your drawings, Defendants' Exhibit 33-B, is that correct? A. Yes.

Q. Would there be any difference in the function and operation of the clamp that we have just been referring to, Plaintiffs' Exhibit I, and the clamp that was shown in your drawing, Defendants' Exhibit 33-B? A. I am not sure I am clear on your question. You are inquiring about the movement of the standard itself?

Q. Yes, sir, the way it functions as it plows. A. It would be the same action, plowing action.

Q. And that is the same movement that occurs in the hinge member and the shank in the structure shown in the Graham 798 patent, isn't it? A. Yes, that would be the same action.

Q. Now, we placed a chisel on the lower end of the shank, Plaintiffs' Exhibit I, to show a tool that would be mounted in actual plowing operations, a tool such as the sweep or spike, whatever you might want to use in the ground working tool, would be placed in the same [146] location as an alternative ground working tool, is that right? A. Yes.

Q. There are two bolts to hold that particular tool on the shank, is that right? A. Yes, two plow bolts are used.

Q. Any particular structure of a plow bolt? A. The plow bolt has a round flat head that fits into a recess in the chisel or sweep to eliminate the bolt head sticking above the surface of the ground working object.

Q. It would be kind of like a flatheaded wood screw, is that right? A. Yes, of that nature.

Q. I believe that in commenting about some changes that were made possibly we overlooked one. In the structure as you have shown it in Defendants' Exhibit 41, you added some ribs on the upper part of the hinge member, did you not, over what you had in your original design? A. The original design, the hinge member was made from a flat piece of bar stock, and when we made the change from the fabricated structure to the cast structure, reinforcing ribs were included in the top surface of the hinge member as a usual means of providing strength for [147] a cast part.

Q. That is these ribs that I am pointing to here in the hinge member of the 650 series? A. Yes.

Q. Now, I believe also in your structure, and possibly it does not show in your drawing, Defendants' Exhibit 41, but there are spaced ribs on the bottom of this hinge member, are there not, in the actual device? A. Yes, that is correct. That again is a usual practice. In a cast member it is much easier to cast a straight surface of that nature than if it was smooth without the ribs.

Q. But the two bottom ribs on the hinge member engage the upper face of the shank? A. That is correct.

Q. The purpose of the two spaced ribs on the bottom face of the hinge member is actually to avoid any little extensions that would cause a rocking action rather than a good, flat contact, is that right? A. It is to facilitate casting of two straight surfaces.

Q. You want a straight surface so it will have good contact with the upper face of the shank? A. Yes, sir.

Q. Were there any other changes that we might have overlooked in your development of the 650 series from the [148] time you made it into a casting till you made a commercial device? A. We changed the means of supporting the cushion spring, the base of the cushion spring when we went to the casting. In the fabricated version, the base of the spring contacted the top surface of a plate, the forward end of the fixed member, and in the cast version we provided a spring base, separate spring base that had a pivoting device which permitted proper alignment of the line of pull with the compression spring.

Q. You also made a base on the washers or spring seats so that it would engage the spring and the spring wouldn't have to have a round end, is that right? A. That is correct.

Q. Is this a more economical method of making it, to have a seat? A. Yes, there is a price differential. You save the grinding cost on the spring manufacture.

Q. That doesn't make any difference in operation, does it? A. The performance of the springs would be essentially the same.

Q. Approximately when was the first fabricated model of your clamp tested? A. September of 1953.

[149] Q. Do you know approximately when the first one was sold, commercial device? A. There were none of the fabricated—

Q. I mean the first commercial device, the casting. A. Oh, excuse me. Our first sales would have been in the spring of 1954.

Q. Have you had breakage of the parts with your 650 series in actual field operations? A. In general they have been quite serviceable. There has been some minor—

Q. You haven't had any real excessive breakage of shanks with the 640 series? A. No.

Q. Then you apparently have solved the problems of the rocky territory plowing, as far as your company is concerned? A. Apparently so.

Q. You also developed the 100 series clamp, did you not? A. Yes.

Q. Approximately when were you assigned the project of developing the 100 series? A. I believe we started work on that in 1958.

Q. And what was your position relative to that project? A. I was project supervisor at the time.

Q. Were you given any reasons for developing a new tool [150] carrier at the time you were assigned the project on that—on the 100 series? A. We felt that there was a need in our marketing situation for a lighter, more economical tool carrier than the 650, which was the basic reason for undertaking the project that finally ended with the placing of the 100 tool carrier on the market.

Q. Did you also want to make a complete drawn plow that would be sold in a similar condition to the farmer? A. I am not sure I understand you. It was going to be a drawn machine. Is that the question?

Q. Yes, with the clamps mounted on the frame so the farmer could have it as a complete plow? A. Well, of course it is sold from the factory unassembled. Maybe I am not understanding your question.

Q. Do the dealers assemble the plows for the farmers? A. Yes, that is right.

Q. What was your first step in starting the design of the new tool carrier? A. After being given the project of developing a lighter, more economical machine, I proceeded to investigate possible ways of attaining that objective. My first efforts were in the direction of using a solid square bar of a 2-inch square dimension rather than the 2-1/4 and using lighter frame members.

[151] Q. Did you make any investigation in the field as to what else was on the market? A. We were aware of the machines in the field, yes.

Q. Did you make any further investigation at that time? A. Not as a part of this project as such.

Q. Under your other trips you were fully familiar with the competitors' equipment in the field? A. Yes.

Q. Were any preliminary drawings made of the new device, in the preliminary layouts? A. Are you referring to the machine itself or the—

Q. The clamp. A. The clamp itself? Yes, we made drawings of our first versions.

Q. Mr. Hunter, I show you sets of drawings that have been marked for identification Defendants' Exhibits 45-A and 45-B. Were those your preliminary drawings which you made relative to the 100 series? A. Yes, they were.

Q. You don't have any other drawings that were made prior to these? A. No. These were our first.

Q. And these were the drawings that were sent to Mr. Parker or to the patent department of Deere & Company? A. They were.

[152] Q. Did you have anything to do with placing the pencil notations or marks for possible revisions on Defendants' Exhibit 45-B? A. Well, I was in a conference when they were put on, but I didn't put them on.

Q. I show you exhibit that has been identified as Defendants' Exhibit 46. Can you tell us what that is? A. This is a drawing of our complete assembly of the flat cushion spring standard for the 100 tool carrier.

Q. And that would be substantially as it is now manufactured and sold? A. Yes.

* * *

Q. (By Mr. Gold) Mr. Hunter, the clamp I am now holding up, identified as Plaintiffs' Exhibit J, that is the commercial 100 series Deere clamp of the same structure as shown in the drawing, Defendants' Exhibit 46? A. Shall I come down there to identify this?

Q. Yes, if you will. A. Yes, sir, it is.

Q. Now, Mr. Hunter, will you please step to the easel and tell us how the 100 series clamp operates in plowing and the movement that occurs when the chisel strikes a rock or immovable object. [153] A. In normal operating

conditions, where the soil is free of obstructions, the standard would be held in this position (indicating), by the compression springs, this position being determined by the upper base of the hinge member striking the lower face of the tool bar, which in this case is a square tube. When the chisel or sweep on the lower end would meet the immovable object, meet resistance at that point, it would cause the standard and hinge member to take a hinging action, which would cause the forward end of the standard to move downward, and the lower end with the chisel or sweep on it to move upward and to the rear, thus relieving its contact with the obstruction. After passing over the obstruction the stored energy in the compression springs through the bolts to the connection to the forward end of the hinge member would cause the standard and hinge member to hinge upward on the forward end, and once again assume its proper working position against the stop.

Q. That would be the same movement primarily as we demonstrated with your 650 series earlier this morning? A. Yes.

Q. I believe you said that with the commercial device as shown in Defendants' Exhibit 46, that the hinge member strikes or has a face that engages the box carrier, the [154] tube, is that right? A. Yes.

Q. Are those faces designated by the numerals on the Defendants' Exhibit 46? A. Yes. The lug on the top face of the hinge member is indicated by the number 16, and the area of the tool bar that it strikes is indicated by the number 17.

Q. Those memos were placed on that drawing by you? A. As I recall, we numbered these at the time of the depositions in Moline.

Q. Now, with the structure shown in Defendants' Exhibit 45-B, before the alterations, where would the stop be for holding the shank in its normal operating position? A. The stop would have been the forward upper surface of the hinge member, which would contact the lower forward surface of the front fixed member.

Q. That would be the lower surface of the part that is marked with a pencil numeral 2 in Defendants' Exhibit 45-A? A. Yes.

Q. That is also a number that you put on this drawing at the depositions in Moline? A. I am not sure that I put those numbers on, no, sir.

Q. But that number, the 2 in the circle, does designate the face that would form the stop? [155] A. Yes, sir.

Q. And the change made from the structure shown in the drawings, Defendants' Exhibit 45-A and 45-B, was to take off a little material on the forward upper end of the hinge member and add a little material in the portion underneath the tubular member, is that right? A. That was the revision, yes.

Q. So as to move the stop from the forward portion of the fixed member and hinge member to the hinge member added to this frame? A. Yes.

Q. Did that change the function or positioning of the shank in any manner? A. No. Those revisions were so made and the parts proportioned as to maintain the standard in its proper working position.

Q. In both the original design as you had it on the Defendants' Exhibits 45-A and 45-B, and also in the structures shown in Defendants' Exhibit 46? A. Yes.

Q. The shank had the same position? A. Yes.

Q. When you are plowing in hard soil—maybe we can say virgin soil—would there be a tendency for the shank and hinge member to swing and compress the springs? [156] A. Yes. Extremely hard ground will cause that hinging action. In other words, it is dependent upon the amount of resistance that the chisel encounters.

Q. Now, this fixed member is made in two halves that are clamped tight to the tubular frame, is that right? A. Yes.

Q. So that they are rigidly held together? A. Yes.

Q. They are supposed to operate rigidly held together so that they are real right and can't move, one relative to the other? A. Yes.

Q. They both cooperate to mount the hinge member and the shank so the hinge member and shank can pivot, is that right? A. Yes.

Q. You may resume the stand now.

I believe you advised us that you didn't have any other working drawings of the 100 series, is that right? A. Of the clamp arrangement?

Q. Yes, sir. A. Yes, that is correct.

Q. As I understand it, this tube is a part of a more or less rigid frame that is carried on wheels and the [157] clamps are spaced along the frame members, these frame members extending transversely of the path of travel of the plow? A. Yes.

Q. And when you are ready to plow you in effect raise the wheels relative to the frame so the frame will go down and the chisels enter the ground? A. That is correct.

Q. More or less like we saw in that picture yesterday morning? A. Yes.

Q. In your 100 series, can you tell us where the spring bolts connect to the hinge member? A. Would you like to have me point it out?

Q. Can you show us on Defendants' Exhibit 27-A? A. This bolt passing through the compression spring passes through a hole in the fixed member to a hole in the upper forward end of the hinge member and the head of the bolt is under this lip of the forward end of the hinge.

Q. You have two separate bolts in this 100 series instead of the U-bolt that you had in the 650 series? A. Yes.

Q. The bolts cooperate with the spring to transmit the force of the springs to the hinge member substantially [158] in the same manner or for the same purpose as in the 650 series with the U-bolt? A. Yes.

Q. In the 100 series, the lower end of the springs rest on the upper part of the forward end of the fixed member? You don't have any separate washers or collars on the 100 series, do you? A. That is correct.

Q. You have an angular arrangement immediately above the head or head and washer of the spring bolt so that that does provide a rocking action for the spring bolt as the hinge member moves? A. Yes. That particular shape is provided to keep the loading of the bolt under the center of the head rather than loading the edge of the bolt head as the hinging action takes place.

Q. And that would tend to prevent tipping of the springs during the hinging action? A. Yes. That would tend to reduce the tendency for sideloading in the bolt.

Q. And side loading in the bolt would cause the springs to tilt? A. It could contribute.

Q. Do you find there is much wear in the parts of the structure 100 series such as is shown in Defendants' [159] Exhibit 46? A. No. This arrangement has been quite serviceable.

Q. Never excessive wear in any parts of it? A. No.

Q. Does this bolt, the two bolts and the plate underneath the shank at the rear of the hinge member embrace the shank? A. Yes. There is one bolt on each side of the shank.

Q. And a plate underneath the shank so that there is an embracing relationship? A. Yes.

Q. Do those plates get loose? A. We have had no field reports of their loosening.

Q. That plate and bolt arrangement is very similar to the plate and bolt arrangement at the rear of the Jeoffroy hinge member, as in Plaintiffs' Exhibit E-1, is that right? A. It appears to be.

The Court: Mr. Gold, I don't understand in the series 100 member how the shank or pivoting member engages the bolt.

Mr. Gold: The shank or pivoting member engages the bolt?

The Court: Yes.

Q. (By Mr. Gold) Mr. Hunter, can you explain how the [160] bolt is engaged with the pivot member?

The Court: This is your shank here (indicating)?

A. Yes. This is still part of the hinge member up to this part (indicating).

The Court: Oh, this is part of the hinge member here, part of the pivoting?

A. Yes.

The Court: I see. So when pressure is applied here (indicating) that brings pressure down on this pivoting member, which pulls down the coil?

A. That is correct.

Q. (By Mr. Gold) The portion that we were just showing the Court, Mr. Hunter, would be the forward part of the hinge member that has been designated with a letter "A" on Defendants' Exhibit 46, is that right? A. Yes.

Q. And the head of the spring bolt is under that portion and the spring bolt is designated with a numeral 15? A. Yes.

Q. The number 15 being on the upper end of the spring bolt? A. Yes.

Q. Can you tell us the reason you place the standard or shank below the hinge member rather than above? A. The resultant forces, resultant loading of the standard [161] into the clamp arrangement is upward and to the rear. By having the standard below the hinge member we are handling compressive forces rather than tensile forces in the members of the clamp.

Q. And that gives you a much better or more favorable stress arrangement for your standard than you would have if you place the standard above the plate member of the hinge member? A. We feel that it does.

Q. Now, the upper face of this shank engages the lower face of the hinge member, does it not? A. Yes.

Q. Substantially the same as it does in your 650 series? A. Yes.

Q. Tell us how the force is transmitted from the shank or standard through the fixed member to the beam. If you care to you may step down here and point it out on the drawing, Defendants' Exhibit 46. A. The resultant force from the standard being imposed upon the clamp arrangement is upward and to the rear. Inasmuch as the standard is attached by a bolt at the forward end to the hinge member, this rearward force then is transmitted to the hinge member through the bolt, and is in turn resisted by the pivot pin which engages the fixed member. The upward force is transmitted [162] in this area (indicating) into the lower face of the hinge member and in turn into the pivot pin into the fixed member and into the spring member.

Q. Now, the bolt that you referred to between the shank and the hinge member is the bolt that is down at the lower end of the forward end of the shank, is that right? A. Yes, sir, this bolt (indicating).

Q. As the compressive force of the spring is increased, or maybe I should say as the forces are such that it tends to compress the springs more and more, there is a tendency for the shank to bend at the rear of the hinge member, is there not? A. Yes, sir. Any load imposed upon the bottom end of this standard will cause deflection in this beam.

Mr. Morris: Excuse me just a minute. In the beam?

The Court: You mean the shank?

A. The shank. This is a beam member in reality, but it is in the shank in this case, yes, sir.

Mr. Morris: Since we are referring to the plow beam as a beam, let's try to keep the terminology separate.

A. Yes, it would be confusing.

Q. (By Mr. Gold) And your greatest tendency of bending [163] would be at the rear of the hinge member? A. Yes. This is your highest load area.

Q. And it is to keep that load more favorable that you place the shank below the plate of the hinge member, as you mentioned awhile ago? A. Yes.

Q. Has the 100 series plow been successful? A. Yes, it has.

Q. To some extent the 100 series has taken the place of 650 series in sales? A. There has been a trend in that direction.

Q. Will the 100 series do anything the 650 series won't do? A. No.

Q. Mr. Hunter, I believe you say that you had seen a Jeoffroy clamp in the field back before 1953 or around 1953, I believe you said. Would that have been a clamp such as this one I have in my hand, which is Plaintiffs' Exhibit C? A. I wouldn't recall the details of the Jeoffroy clamps I saw that long ago.

Q. You do recognize this to be a Jeoffroy clamp? A. Apparently it is. It is marked that way.

Q. In the 100 series, as shown in Defendants' Exhibit 46, with the fixed member rigidly clamped to the tubular [164] frame, the tubular frame becomes a fixed member with the fixed part of the clamp, doesn't it?

Mr. Morris: Objection to that, Mr. Gold. I think it is quite obvious that those are two separate parts, are they not? And what type of a fixed member are you talking about, when you say it becomes a part of the fixed member?

Mr. Gold: I believe this man can tell us whether or not it is a fixed member of the clamp, if they don't operate together.

Mr. Morris: Is your question that the clamp becomes a part of the beam or that the beam becomes a part of the clamp? Is that the question?

Mr. Gold: Yes, sir, the clamp becomes a part of the beam.

Q. (By Mr. Gold) Is that right, Mr. Hunter? A. I am not sure I understand the question. It can still be taken off. It isn't an immovable part.

Q. But in operation in effect they become one? A. It is rigidly attached to the square tube.

Q. You lubricate the pivot pin, do you not, in the 100 series? A. Yes, there is a grease fitting on the hinge member.

Q. Is that pivot worn considerably in use in the field? A. No. We have had very good service performance.

[165] Q. You haven't seen any that were loose? A. Not excessively.

Q. How much looseness would it have to have to be excessively loose? A. That would be a matter of opinion, I imagine. One man would call one loose, someone else could call it tight. It would be hard to define.

Q. What would you, as an engineer for Deere & Company, call this particular piece of equipment?

Mr. Morris: Your Honor, I object to that as not being material or relevant to any issue in this lawsuit. I don't believe there is anything in this patent about looseness or excessive looseness or rigidity or anything of that sort.

Mr. Gold: Your Honor, the man said—

Mr. Morris: Furthermore, it calls for a conclusion and opinion of this witness upon a matter which cannot be defined.

The Court: I don't see where it is relevant.

Mr. Gold: I will withdraw the question.

Q. (By Mr. Gold) I believe you stated that the shank and hinge member swing as one around the pivot point, pivot pin? A. Yes.

Mr. Gold: You may examine.

[166] Cross-Examination by Mr. Morris.

Q. Mr. Hunter, you were asked a question here by Mr. Gold as to whether or not the pivotal action of the shank in the 100 series Deere device is substantially the same as the pivotal action of the shank in the Deere 650 device. You remember that question, do you not? A. Yes.

Q. And I believe it is your testimony that it was? A. Yes.

Q. You were further asked as to whether or not the pivotal action of each of those shanks in the two Deere structures was essentially the same pivotal action as that in the Graham 798 patent that is here in issue and I believe you answered that yes. Is that correct? A. Yes.

Q. Mr. Hunter, if we take in the plow art here the various types of spring clamp mountings which are designed for mounting a shank to a plow frame member, so that the shank will have pivotal action, that is, so that it can pivot and return to a normal operating condition, would the same thing be true? That is, that the pivotal action of the shank in all of those structures which have been here referred to such as the original [167] Graham 811, the Jeoffroy and the Deere, be substantially the same? The pivotal action, that is all I am talking about at the moment. A. Yes, the pivotal action would be the same.

Q. In all of them, whether it be on the original Graham 811 or the Graham 798 patent structure or the Deere structure, is it true that the shank has a normal home based position, which would be called normal operating position, and that there is an arrangement which permits that shank to pivot when it encounters an obstruction

such as a rock, clear the obstruction and then return to its normal position? A. Yes, that is correct.

Q. And in that broad sense of a pivotal action, all of them are essentially the same, are they not? A. That is correct.

Q. Now, I want to make it crystal clear, of course, that I am not talking about in that analysis the specific detail of structure. We are talking about the broad pivotal function of the devices. A. Yes.

Q. All right. Now, just two or three other items, Mr. Hunter, and I will reserve most of this examination for our direct case.

In 1953, when you were assigned the design [168] task of designing the Deere 650 or that is the implement which ultimately was the Deere 650 implement, was that job confined to the design of a spring clamp, or was it a design of a complete plow, including frame members, wheels, levers, lifts, and so on? A. It was a complete project for a new tool carrier.

Q. All right, sir, and did that involve the designing of clamps for the fixed type attachment to the beam as well as the pivotal or spring type attachment? A. Yes. We developed that at the same time.

Q. And it just so happens that we have here involved in this case the problem which relates to the design of the spring clamp type of attachment that went into that structure? A. Yes.

Q. And is the same thing true when you came to the design of the 100 tool carrier in 1958, was it a complete job of a complete tool with all of its parts or was it merely a spring clamp design job? A. It was a complete tool of the complete parts and the spring standard arrangement.

Q. Just one other question at this point. Let's consider for a moment the geometry of the spring steel shank or standard and the forces that are involved or the forces that that shank is subject to in operation. We [169] have talked here awhile ago, on Mr. Gold's examination, about the rearward forces in the shank and the upward forces in the shank and the loadings, how those are transmitted into the clamp structure and in turn to the beam of the plow, have we not? A. Yes.

Q. Now then, insofar as the forces on the shank itself are concerned, does it make any difference whether the shank is pivoted above or below? Now think with me, please. The forces on the shank itself, as distinguished from the forces on the other parts of the structure. A. No, sir, it should make no difference to the standard. The standard, the chisel point at the lower end I am sure would have no knowledge of whether the pivot point was above or below the standard.

Q. And when we talk about a design which more effectively transmits the forces into the structure, we are primarily talking about the problems of stresses and strains and the transmissions of forces through these other parts into the frame of the plow, which is going to carry those forces, isn't that true? A. That is correct.

Mr. Morris: All right, sir. I will reserve the rest of the examination of this witness for our case.

[170] Re-Direct Examination by Mr. Gold.

Q. Mr. Hunter, Mr. Morris was holding this clamp, Defendants' Exhibit 6, which is marked the Graham 811 clamp, before you when he was asking you if you didn't mean that the pivotal action of all these clamps would be the same. Is it not one—

Mr. Morris: I believe I did not ask him if the pivotal actions were the same. I believe I asked him if they were not substantially or essentially the same.

Q. Is that the one you had before you? A. It appears to be.

Q. Do you know how the pivotal action is on this particular clamp? A. Yes.

Q. Will you tell us how it is? A. Well, when the resisting force is increased at the lower end of the standard on this device, the standard assumes a hinging action which would tip the forward end down and compress the spring.

Q. And where would the fulcrum point of the shank be during that movement? A. The fulcrum point on this device is the lower rear lip of the fixed member.

[171] Q. That is the lip up here (indicating)? A. Yes.

Q. Not this pin, is it? A. No, the standard itself would pivot about the lip I described.

Q. The hinge member would pivot about the pin, the hinge pin, wouldn't it? A. Yes.

Q. And the shank would pivot about the lower edge of this fixed member? A. Yes.

Q. Is that the type of pivotal action that you have in the structure shown in Defendants' Exhibit 46? A. In general that is. It permits the lower end of the standard to move rearward and upwardly.

Q. The shank pivots in this case of your structure, 100 series, about the pivot pin, doesn't it? A. Yes.

Q. And so does the hinge member pivot about the pivot pin? A. Yes.

Q. That isn't what you said about this structure, Defendants' Exhibit 6, is it? A. The standard pivots in the same manner.

Q. Pivots in the same manner even though at different points? [172] A. The lower end of the standard moves to the rear and upward in both cases.

Q. Oh, that is what you meant in your answer to Mr. Morris, that the standard moves upward at the rear end in all of these cases? A. That was the general idea of the standard motion, yes.

Q. And you weren't saying that the pivotal action that is present in the 811 structure as shown in Defendants' Exhibit 6 is the same as in your 100 series or 650 series? A. We were talking about the general motion of the standard itself.

Q. And you were saying the same thing when you say it made no difference whether the pivot was above or below the shank?

* * *

[173] A. I am not sure I am clear on your question. I assume you are referring to the action of the standard?

Q. (By Mr. Gold) That is what we were talking about a minute ago, wasn't it? A. Yes.

Q. And so when you refer to the same thing, it would be assumed that I was referring to that action, wouldn't it? A. Yes.

Q. Now, were you referring to that same action when you said it made no difference whether the pivot was above or below the shank? A. Yes.

Mr. Gold: That is all.

Mr. Morris: No further questions.

(Witness excused.)

F. C. FENTON, called as a witness on behalf of the plaintiffs, was duly sworn and testified as follows:

Direct Examination by Mr. Gold.

Q. Mr. Fenton, please state your name and residence. A. F. C. Fenton, Manhattan, Kansas.

Q. What is your age? A. Age 70.

[174] Q. In what business are you engaged? A. I am a retired professor of agricultural engineering.

Q. Where was your last employment, Professor? A. At Kansas State University.

Q. What was your last position with the college? A. I was professor and head of the Department of Agricultural Engineering.

Q. What did you do before you went to Kansas State as a professor? A. Well, I worked at the Iowa State University for two years, then I worked for the University of Missouri for a year, and after World War I I returned to Iowa State for 11 years as a teacher and research worker in the Department of Agricultural Engineering.

Q. The Iowa State College is the one at Ames, Iowa? A. Yes.

Q. What degrees do you hold? A. Master's, and Master's degree from Iowa State.

Q. Do you belong to any engineering societies or organizations? A. Yes, sir.

Q. Would you tell us some of those. A. ASAE, that is the American Society of Agricultural Engineers. The American Society for Engineering Education, Registered Professional Engineer in Kansas, [175] and a National Professional Registration for Engineers.

Q. Did your duties at Kansas State College require you to be familiar with agricultural machines or equipment? A. Yes, sir.

Q. Are you familiar with what we call chisel plows? A. Yes, sir.

Q. Does Kansas State College own or operate any such plows? A. Yes. We have had such plows on our branch stations in western Kansas for 20 years, more or less.

Q. And your work would take you to those branch stations? A. Yes.

Q. I have heard of farm implements called cultivators. Is there a difference in cultivators and chisel plows? A. The principles of operation are similar, but the cultivators are shallow operating tools and are mainly intended to kill weeds and to find the surface of the soil.

Q. I have also heard of harrows. Is that similar to cultivators or chisel plows? A. They are an even lighter duty machine than a cultivator. The harrow is to break up lumps, clods, smooth the surface, cover seed, fine seed, and similar operations.

Q. Harrow would be to smooth it up on top for a seed bed? A. Yes. It also kills very young growing weeds and is [176] useful in that respect.

Q. Have you read the Graham patent No. 2,627,798, the patent in suit? A. Yes, sir.

Q. Do you know what the patent shows and describes? A. Yes, sir.

Q. Have you before this time had occasion to read copies of patents? A. Yes, on numerous occasions.

Q. Have you appeared and testified as an expert in patent suits involving agricultural equipment? A. Yes.

Q. Could you name some of those suits? A. I appeared on a case between Gleaner and J. I. Case relative to combines. Also appeared on a case between Minneapolis-Moline and Massey-Harris on combines. There was another one I recall from the Superior Separator Company of Minneapolis and the Ottawa Implement Company of Ottawa, Kansas. Then of course I have appeared on two previous cases related to these spring clamps.

Q. You were the expert witness for the plaintiff in the Graham versus Jeoffroy case that involved the 811 patents? A. Yes, sir.

Q. Also in the suit, the next suit that involved both the [177] 811 and 798 patents? A. Yes.

Q. You were also the expert in the contempt case between Graham and Jeoffroy, were you not? A. Yes, sir.

Q. Have you seen clamps such as involved in the present suit in operation? A. Yes, I have.

Q. Have you examined spring clamps manufactured and sold by the defendant, the Deere Company? A. Yes, sir.

Q. Have you read and do you understand the claims of the Graham patent in suit? A. I believe so. I have read them and I believe I understand them.

Q. Do you have a copy of the Graham patent in suit? A. Yes, sir.

Q. That is Plaintiffs' Exhibit A. What does the patent in suit say relative to the invention or structure, what it relates to? A. That would perhaps be the opening statement of the—

Q. Yes, read the first paragraph of the patent. A. "This invention relates to a plow of a type including ground conditioning tools that are carried on shanks having support on a mobile frame and which work under [178] the surface to heave and break the soil and form alternate ridges and furrows having exposed surfaces composed of sod, straw and clods normally occurring on a field.

"When the field contains rocks and other obstructions, it is desirable to mount the shanks of the ground working tools for rocking movement on the frame of the plow so that the ground working tools will pass freely over the obstructions and return to normal plowing position without injury to the plow."

Q. Now, you read both the first and second paragraph, I believe, didn't you, Mr. Fenton? A. Yes, sir.

Q. Does that suggest that it is to work like a cultivator or is there some kind of different work?

* * *

[179] A. All tillage tools cultivate the soil, but this plow is intended for deep tillage, to move more soil—

Mr. Morris: Object, Your Honor, the answer is not responsive. The question is whether or not this language that he has just read from this patent suggests anything about cultivation as distinguished from plowing, not what this witness's opinion about these plows may be, about these machines.

A. I didn't so understand your question. I understood you were asking my opinion on how this particular device works.

[180] The Court: No, I don't think that was the question, Mr. Fenton.

Q. (By Mr. Gold) The question was relating to the language as to what it would suggest as to the type of plowing or operations, and would that be like a cultivator? A. It is more work on the soil and disturbs the soil more than a cultivator. That is the main difference.

Q. I believe what you read referred to ridges and furrows. Can you tell us why it might be desirable to plow the ground and break it up to form those ridges and furrows?

Mr. Morris: Your Honor, I think we have gone far enough with this business about the type of plowing. The issue in this lawsuit is whether or not this clamp patent is infringed, whether or not these Deere devices infringe this clamp patent, and there is nothing in this patent that says anything about the type of plowing that is done, there is no issue in this lawsuit about the type of plowing that is done. The question is a structure and performance of clamps.

I object to the question as immaterial to any issue in the case.

Mr. Gold: If your Honor please, the function of these clamps is to support tillage tools that are to [181] do chisel plowing, and that is the very important type of plowing that we are concerned with here. It is these clamps that make it possible to do that chisel plowing in the rocky territories.

The Court: Is your question to him for the purpose of showing the status of the prior art in this field? And if you are making an attack upon that itself, that will be one issue in the case.

Mr. Gold: Of course what I had in mind was his opinion of what the patent related to and if it relates to that type of equipment and the function of the equipment that is claimed here, and I was developing the actual purpose of the equipment that is involved in this suit, the clamps that hold those ground working tools.

Mr. Morris: I will withdraw the objection, Your Honor. It is immaterial, but I don't want to interrupt this case.

The Court: Very well.

Q. (By Mr. Gold) Can you tell us why it might be desirable to plow the ground in formed ridges and furrows? A. The operation of these plows has been imminently successful in the fact that –

Mr. Morris: Object to that as not responsive.

A. I think it will be if you will allow me to finish.

[182] The Court: Well, he is testifying as an expert. You may continue.

A. Because the formation of ridges and furrows permits the entrance of rainfall at a higher rate and in the semi-arid regions of the west has been beneficial, storing moisture, and preventing blowing, and generally beneficial as a tillage practice as contrasted to the moldboard plow and other tillage tools which were in vogue years before that.

Q. (By Mr. Gold) Now, we have talked about the rocky territories. If a farmer was plowing a rocky farm would he leave the rocks on the farm or would he remove them? A. Well, he might do both. Some remove them, some work over them, and they are short of time, so they don't get the rocks all removed at once.

Q. If the farmer removed the rocks from his farm, the rocks that he turned up, would he later be apt to find other rocks? A. That has been the experience of farmers throughout the rocky regions, that more rocks become available or in contact with tillage tools on the surface as the years go by.

Q. You mean that after you have cleared all the rocks away, and you can till the soil without striking [183] rocks, later on you may strike some? A. That is right.

Q. What would be the cause of that? A. That is a controversial question. Personally I think erosion is the main cause, but also there is the theory that the frost action, the heaving of the soil, moves the rocks upward in the soil.

Q. Does the patent specification give the purpose of the invention in this device? A. Yes.

Q. The Graham invention device? A. Yes.

Q. Would you read those for us, please. A. "It is therefore the principal object of the present invention to provide a simple and reliable mounting for attaching the shanks of the ground working tools to the mobile frame whereby the shanks may rock when necessary and vibrate under action when the plow is working in rocky and/or heavy soils. It is also an object of the invention to provide a mounting which includes a fixed part and a movable part pivotally connected with the fixed part and having a shank attaching portion to which the shank is rigidly secured and resiliently retained on the fixed part."

Q. That was the third paragraph of Column 1 of the patent [184] specification? A. Yes, sir.

Q. Now, will you turn to Column 2 on page 1, and starting at the middle of line 17 would you read the next sentence, please. A. "The shank 2 is formed of metal bar stock of a substantially rectangular cross section and is of a width and thickness to provide the necessary strength and a certain amount of resiliency."

Q. Now, when you say the shank 2, where would you find that numeral? Does that have any reference to any part of the patent? A. Yes, sir, you would refer to the drawings and the shank would be numbered there.

Q. Does that appear in different figures of the drawings? A. Very likely.

Q. These shanks that I have been lifting around here are pretty heavy. Would they still have the resiliency mentioned in that portion of the specification? A. Well,

the resiliency is inherent in their structure. Under stress they will have resilience.

Q. In the Graham 798 structure, what secures the shank to the hinge member? A. There is a bolt at the forward end which bolts the shank to the hinge member. There is also restraining [185] means at the rear of the hinge member, which is in the form of a stirrup, which also results in a restraining action.

Q. In the particular structure shown in Fig. 2 of the drawings of the Graham patent in suit, the spring bolt goes through the shank, does it not? A. Yes, sir.

Q. Also through the plate? A. Through the plate.

Q. The plate of the hinge member? A. Yes, sir.

Q. Could the spring bolt keep the shank from being pulled out of the clamp? A. Yes, it could.

Q. And why is it necessary to use another bolt? A. It may not be necessary, but it was deemed desirable in this patent. It gives a more rigid connection. The spring bolt must have some clearance to function properly and therefore it cannot give a rigid connection.

Q. Now, if you will turn to Column 4, that is on page 2 of the patent specification, and starting with the sentence beginning in the middle of line 34, will you read that sentence, please. A. "The fastening device 56 is then inserted through the registering openings 54 and 55 to secure the shank to the [186] movable part of the mounting."

Q. Now, that bolt 56, which one is that, 56, that you are referring to? A. It is shown best in Fig. 2 of the patent drawings.

Q. Now, where would that be, which bolt are you referring to? A. I am referring to the bolt on the right-hand lower part of the drawing which is labeled number 55.

Q. You mentioned a restraining member at the rear of the hinge member, I believe. What is the purpose of that member? A. That member supports the shank when it is out of the ground and not working, and probably under shock the recoil action after the shank has passed over an obstruction it will help to restrain the shank.

Q. Would that be something like the rebound that Mr. Hunter was commenting about? A. Well, I think so. Rebound is commonly understood.

Q. Was there any particular part of the shank in the Graham patent that permitted it to flex? A. What?

Q. Is there any particular part of the shank in the Graham 798 structure that is permitted to flex? A. There is nothing to prevent it all from flexing. It can all flex.

[187] Q. When you say all you mean throughout its length? A. Yes, up to the bolt which attaches it to the fixed member.

The Court: You mean throughout the length of the shaft?

Mr. Gold: Of the shank, yes, sir.

The Court: The shank, yes.

Q. (By Mr. Gold) Has the particular arrangement of the hinge member and the shank anything to do with the flexing throughout the shank's length? A. It undoubtedly does have, yes, sir.

Q. Does it make any difference in regard to the direction in which the forces are applied to the shank relative to the plate portion of the hinge member? A. Yes, sir.

Q. Do you think that arrangement is a feature of the Graham invention? A. I think it very definitely is a feature of the Graham device.

(Plaintiffs' Exhibit L was marked for identification.)

Q. (By Mr. Gold) Mr. Fenton, I show you a chart which has been marked for identification as Plaintiffs' Exhibit L. Do you have a copy of that chart? A. Yes, sir.

Q. Will you get it out, please.

[188] Mr. Fenton, I believe you now have a chart that has been identified as Plaintiffs' Exhibit L. Did you have anything to do with the preparation of that chart? A. Mostly in a consulting capacity. I was present and discussed it, helped select colors. I did not draw the chart.

Q. When you say you consulted, you mean consulted with plaintiffs' attorneys? A. Yes.

Q. I note there are a number of different colors used on portions of the chart. What do those different colors purport to indicate? A. They are indicative of the different features, different mechanical features of the clamp, so that they can be easily recognized and separated from each other.

* * *

Q. (By Mr. Gold) Tell us what is shown on the Exhibit, Plaintiffs' Exhibit L. A. On the left-hand side there is shown the exact reproductions of the drawings of the Graham patent 798, along with the numbers designating the different [189] parts as they are described in the specifications. These are colored in different ways so that the separate parts are easily discernible.

On the right-hand side of the sheet are pictorial representations of the Deere 650 clamp, also colored to show parts which are similar to those in the Graham patent.

On the center, and printed, center of the sheet and printed is a copy of Claim 1.

Q. Of the Graham 798 patent? A. Of the Graham 798 patent.

Mr. Gold: If Your Honor please, there are four sheets of drawings in the Graham patent, and these figures at the left are reproductions of the first sheet and the fourth sheet. The lower part of the first sheet of drawings has been cut off and the top of the fourth sheet has been cut off so that they would get on this space. Otherwise they are reproductions of those two sheets of drawings.

Q. (By Mr. Gold) Now, in this structure as shown in the Graham 798 patent is there a tool or something carried on the lower end of the shank? A. Yes, sir, there is a chisel indicated.

Q. That would be the chisel at the lower end of the shank, the chisel marked 3 in the drawing? [190] A. Yes, sir.

Q. And is there an illustration of some kind of a frame or tool carrying structure in the Graham 798 patent? A. Yes, sir. The H-beam, which is indicated in all of these—at least three of the illustrations—is the frame.

Q. What color is the frame in the drawings on the chart, Plaintiffs' Exhibit L? A. The frame is colored in blue.

Q. Will you read Claim 1, element by element, and point out where the structure of the Graham disclosure reads on that claim? A. "In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the frame when the plow is in operation in a forward direction, a mounting"—

Q. Just a minute. In the part you read I believe there were some colored boxes. Will you tell us what those colors mean? A. The first one on the word "frame" is colored blue, and we have already pointed that out. The shank is colored green. The lower part of the drawing, there is a portion of the shank also colored green.

Q. All right, sir. Now will you continue to read the [191] claim, please? A. "a mounting for pivotally attaching and supporting the shank of the ground working tool to a transverse member of the frame, the mounting including 1. a fixed member adapted to be fixed to the transverse member of the frame."

This is shown in yellow in the Graham drawing. It includes plates which fit on the bottom of the H-frame. It also includes the plate at the top with a hooked member, which is bolted to the lower member of the fixed member, the lower part of the fixed member, and also includes a set screw on the left-hand side labeled number 16, which further attaches the fixed member to the frame.

Sub-heading a. "a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed."

Q. Will you point that out, please, on the Graham structure, Mr. Fenton? A. Underface is shown best in Fig. 2 and of course is just above the red hinged member and in contact with the hinged member. It is a straight flat face.

"the fixed member having

"b. ears extending rearwardly from said underface at the sides thereof." These are colored in orange—[192] no, the ears are part of the fixed member and therefore

colored in yellow. They are best shown, I think in Fig. 7 under the number 26 and 27. There are two ears. That would be patent terminology. An ear is an extension from the main body, used in this patent.

Q. Now, will you read the next element of the claim and point out where it is found in the Graham structure? A. Element No. 2 is "a shank attaching member having—

"a. An elongated plate portion," which is shown in red, two views, a view in the unit there in Fig. 2 and also a separate showing of that element portion in the lower part of the illustration. "plate portion provided with

"(1) an upper face corresponding with and normally in contact with said underface of the fixed member."

This contact between these two faces is shown by number 11 in Fig. 2, which refers to the line between these two members, the red member and the yellow member.

The Court: Just a minute. I don't find that. You say number 11?

A. Yes, number 11 in Fig. 2.

The Court: I see.

Q. (By Mr. Gold) Mr. Fenton, step to the easel and point out the parts as you read them. Maybe the Court could [193] follow it better.

The Court: That is the point of contact—

A. Point of contact between the upper face of the shank and the underface of the fixed member.

The Court: That would be with the shank or with the fixed member.

Q. (By Mr. Gold) Will you read that element of the claim again and point out where you find it, Mr. Fenton? A. (1) under a. "an upper face." This is the elongated plate portion which is provided with "an upper face corresponding with and normally in contact with said underface of the fixed member."

That is this point between the red and the yellow. I had passed over it before.

Q. All right. Now read the next part of that. A. "and provided with

"(2) a longitudinally extending underface in engagement with a corresponding upper face of the shank

whereby the plate portion of the shank attaching member is between the shank and the fixed member." The plate portion is shown in red, the shank in green, the two are in contact along this line (indicating), and the plate portion is between the shank and the fixed member.

Q. You were pointing to Fig. 2 of the drawing shown on the [194] chart in Plaintiffs' Exhibit L, is that right? A. That is right.

Q. Now, will you read the next one? A. Element 3, "means connecting the elongated plate portion with the shank for maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion of the shank attaching member." This element is shown in gray and is the bolt which attaches the shank to the plate member at the forward end.

"4. a transverse pin pivotally connecting the shank attaching member to the fixed member at the rear ends of said normally contacting faces and whereon the shank attaching member pivots upon rocking movement of the shank." This is shown in brown and is best shown in this particular location where the pin extends through the openings in the ears. It is also shown in cross section in Fig. 2 at this point (indicating).

"5. a coil spring having one end seated on the forward end of the fixed member." The coil spring is shown in orange and is seated here on the forward end of the fixed member.

"6. means having connection with the forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said [195] normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member to maintain the normal plowing depth of the ground working tool." This is the bolt which in the Graham patent has a "T" connection across the bottom which bears on the bottom of the shank through the washers or plates at the top and the nuts for compressing, tightening or loosening the spring.

Q. Does that claim have any requirements for the length of the upper face—of the longitudinally extending underface of the fixed member? A. No, it doesn't men-

tion any length. It says that it terminates forwardly of the transverse member. That is the only designation.

Q. Now, I believe that it mentioned an upper face of the plate portion in contact with the underface of the fixed member. Can you tell me the purpose of the contact with those two faces in the Graham 798 structure? A. The main purpose of that contact is to provide a stop engagement for the spring. That is, the spring is tightened, providing compression to urge the shank upward and hold the ground working tool in position. This contact provides the stop engagement.

Q. Is there any part of that claim that further indicates [196] the purpose of those faces? A. No, sir, I do not find such.

Q. What would be the reason for having some stop for any normal position of the tool? A. Well, the tool must be controlled to a certain depth in the ground to work properly. When you have a plurality of tools you like to have them all reasonably close in their adjustment in the ground.

Q. Would that have anything to do with what we have referred to as suction? A. Suction is a part of some tools, particularly the sweep. The chisel has little—not a lot of suction, some of course. All tillage tools except the harrows have some suction to help hold them in the ground.

Q. You say that suction is to help hold them in the ground? A. Yes, to help them enter the ground and help hold them in the ground.

Q. Now, I believe you said that the illustrations on the right of the chart, Plaintiffs' Exhibit L, was of the Deere structure, is that right? A. Yes, Deere 650 spring clamp.

Q. Would that be a structure such as we have in this one, identified as Plaintiffs' Exhibit I? However, this one has the springs removed. If the springs were put back on it would that be the structure like is shown [197] on the drawing? A. Yes, sir, that is the structure.

Q. Now, Mr. Fenton, will you please read Claim 1 of the Graham 798 patent, element by element, and compare it with the Deere 650 spring clamp structure, as shown on

Plaintiffs' Exhibit L? A. Starting with No. 1, "a fixed member adapted to be fixed to the transverse member of the frame." This member in the Deere includes this box-like structure in the lower part, together with the bracket which is bolted to the lower part by two heavy bolts. The fixed member having "a. a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed." This fixed member has only a very small horizontally extending underface, which is the face of this nub or projection extending down to form the contact.

Q. Mr. Fenton, I didn't hear you read the introductory part of the patent. A. I thought it was perhaps unnecessary to read that.

Q. I think you ought to start with the beginning of Claim 1. A. "In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the [198] frame when the plow is in operation."

Q. Will you point out the frame and show the parts in the colors as you read the different ones? A. The frame is shown in blue. This is really the tool bar type of a Deere clamp or unit, and in a way dictates or at least affects the shape of the fixed member because the clamps must be different than they are in the case of this one (indicating). The shank is shown in green or a part of the shank, and the same here (indicating), which extends under the device at that point.

Now I am down to "b."

Q. No, go ahead and read this (indicating). A. "a mounting for pivotally attaching and supporting the shank of the ground working tool to a transverse member of the frame."

Q. Now go on with Element 1. Start at the beginning of Element 1. A. "1. a fixed member adapted to be fixed to the transverse member of the frame," shown in yellow. It includes the lower part, the upper part, the V-shaped notch, the two bolted together with two heavy bolts.

The fixed member having:

"a. a longitudinally extending underface terminating forwardly of the transverse member to which said mounting [199] is adapted to be fixed." The only part that could be described as a longitudinally extending underface is the bottom of this small nib or extension, extending down from the forward end of the fixed member.

Q. I have a part of the exhibit we dismantled yesterday of a 650 Deere spring clamp. Will you point out the face that you are talking about? A. That is this face shown at that point (indicating).

The Court: That lug there?

A. That is the lug, which extends downward, contacts the top of the shank.

Q. (By Mr. Gold) All right. You may proceed. A. "b. ears extending rearwardly from said underface at the sides thereof." These are extensions from the main body of the fixed member, one on either side, which are drilled to receive the pin.

Q. What are the purposes of the ears in the Graham structure? A. The ears are large supports for the pivot pin.

Q. Now, can you point out on this fixed member of the Deere clamp, 650 series Deere clamp, as to the part you referred to on the drawing a minute ago? A. These are the ears (indicating), and there is one on the other side. Enlargements in the casting provide the mounting for the pin.

[200] Element 2. "a shank attaching member having

"a. an elongated plate portion provided with"—the elongated portion is shown in red, as it is in the Graham patent. Here it is shown integral, here it is separated (indicating) in order to show the structure a little more thoroughly.

"plate portion provided with

"(1) an upper face corresponding with and normally in contact with said underface of the fixed member." This element is not present in this clamp because the upper face of the shank attaching member does not contact the underface of the fixed member directly.

The Court: You mean there is space between the two?

A. There is space between the two provided. You can see it in this cross section (indicating), and you can see it better by examining the parts, I think, that part.

"a. a shank attaching member having

"(2) a longitudinally extending underface in engagement with a corresponding upper face of the shank whereby the plate portion of the shank attaching member is between the shank and the fixed member." This shank attaching member has a longitudinally extending underface which is flat, has flat edges. It [201] has a depression here (indicating) but has flat edges approximately a quarter of an inch wide. This member is in contact with the upper face of the shank, and they are so arranged that the shank attaching member is between the shank and the fixed member, as called for by this element. That arrangement is identical with this, with the Deere—

Q. Referring to the illustrations of the Graham structure on Plaintiffs' Exhibit L? A. Yes, sir.

"3. means connecting the elongated plate portion with the shank for maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion of the shank attaching member." That is shown in gray and is the bolt which rigidly fastens the hinge member, shank attaching member to the shank. It also holds this little clip. The additional purpose of that bolt is to hold this little clip in position for locking the portion of the spring bolts.

Q. Now, that bolt you are referring to, that is shown on this portion of the actual 650 series clamp? A. Yes, this is it, and this is the clip right here (indicating).

"4. a transverse pin pivotally connecting [202] the shank attaching member to the fixed member at the rear ends of said normally contacting faces and whereon the shank attaching member pivots upon rocking movement of the shank." That is shown in orange color. It is again at this point, passes through the shank attaching member and to the areas of the fixed member, and is the pivot point on which this shank and shank attaching member pivot.

Q. What color did you say that was shown with? A. Well, it is—if I am not colorblind, it is sort of an orange color, or brown.

The Court: Brown?

A. I guess it is brown. There is little difference.

Mr. Gold: It is kind of hard to distinguish them.

The Court: I see what it is.

Q. (By Mr. Gold) Read the next number. A. "5. a coil spring having one end seated on the forward end of the fixed member," two coil springs, both seated on the forward end of the fixed member, "and

"6. means having connection with the forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed [203] member to maintain the normal plowing depth of the ground working tool." A slight difference in this element in that the spring yieldably maintains the front portion of the shank with the fixed member rather than, as this states, the upper face of the plate portion with the fixed member.

Q. What is the purpose of the contact of the shank with that lug on the fixed member in the Deere structure? A. The purpose is to provide a stop engagement for the spring, as was pointed out by Mr. Parker yesterday several times. This is the point of contact which controls the angle of the shank and the depth or the penetration of the tillage tool.

Q. I don't believe you actually pointed out the structure that—on the Deere 650 series and the color of those in that last element of the claim. Will you do that, please? A. They are purple. These elements—

Q. Will you tell us what they are? A. This is a U-bolt, a double bolt with a bight or a continuous structure at this point. The springs fit up over these bolts and the washers or plates and nuts attach to the upper part, the lower portion or the bight portion of the bolt held in place by this clip.

Q. The clip also being colored purple? [204] A. It is also colored purple.

Q. Now then, can you tell us the function of the structure of the Deere 650 spring clamp? A. The function of the structure?

Q. Its function and operation. A. It provides a mounting for ground working tool on a frame, which is so mounted that it will pivot around a pivot point and provide a ground working tool to till the soil, and will also provide for movement when it strikes hard rocks or other obstructions or even in harder soil.

Q. Is there any relationship between the movement of the shank attaching member and the shank? A. They operate together. They are bolted together at this point, and in the specifications of the Graham patent it is specifically stated that they operate as a unit closely.

Q. I believe in the claim it says shank attaching member. Is that what we have also been referring to as a hinge member? A. Yes, sir, it is a hinge member in these devices.

Q. And we have also referred to it as a plate member? A. Yes, a plate member.

Q. If the plate member portion of the shank attaching member as shown in red were extended forwardly to the [205] end of the green shank and the lug on the fixed member cut off so it would engage the top of the plate of the hinge member, would there be any difference in the function of the device? A. No, I don't think so.

Q. Would there be any difference in the plowing operation? A. None whatever.

* * *

[206] Q. (By Mr. Gold) Mr. Fenton, can you tell me if there is any difference in operation as far as plowing and the jumping of rocks in the Graham 798 structure and the Deere 650 spring clamp? A. No, sir.

Q. Difference, if any? A. I think there is no essential difference in the way they operate.

Q. I believe you said that they would perform substantially the same, the same result? A. Yes, sir, with similar adjustment of springs and tools, tillage tools, they would perform the same operation.

Q. Does it make any difference in the function or operation of the Deere 650 clamp if the whole fixed member is extended rearwardly to a point beyond the pin mounting holes from what would be if there were just some ears extending outwardly from the structure? A. I don't understand your question.

Mr. Gold: Will you read the question?

(Question read.)

A. This extension on the plate member—

Q. (By Mr. Gold) I am referring to the fixed member, Mr. Fenton. I believe that the Graham structure has [207] some rearwardly extending ears on the fixed member? A. Yes.

Q. Does it make any difference whether those ears extend rearwardly from some other part of the fixed member or whether the whole fixed member would be extended to form a box-like portion? A. It would make a difference in the length of the pivoting member possibly. I really would have to see your drawings to answer that question.

Q. What was the function of the upper face of the plate portion of the hinge member in the structures defined in Claim 1? A. The function of the upper plate portion of the hinge member?

Q. Of the upper face of the plate portion of the hinge member in the Graham structure. A. This furnishes the stop engagement between the hinge member and the fixed member.

Q. Would it make any difference whether the stop arrangement is provided by the faces of the fixed member and the shank from that that would occur if the faces of the fixed member and the plate of the hinge member form the stop arrangement? A. There again it is a question of the design of those hypothetical units that you are talking about. If they [208] are properly designed there would be no difference in the functioning.

The Court: I would like to ask a question in this connection.

In the Graham patent, does the upper part of the hinge member serve the same purpose that the lug does on the

fixed member of the Deere 650 series, so far as providing a stopping action for the shank?

Mr. Gold: That is our position, Your Honor. In the Graham structure the underface of the fixed member is engaged by the upper face of this hinge member and that forms a stop for the hinge member.

Now, the shank and the hinge member move together so that the stop could be the fixed member engaging the shank or could be the fixed member engaging the hinge member. In the Deere structure they have put a lug on the fixed member and arranged the plate of the hinge member a little shorter, so that this lug will engage the shank in place of this hinge member (indicating). Our position is that the hinge member and shank move together and therefore the stop, whether it be on one or the other, would be the equivalent. They operate the same, perform the same function.

Mr. Morris: Now it is being understood that [209]that is your argument?

Mr. Gold: Yes, I believe I stated that was our position.

The Court: You are not agreeing to that, Mr. Morris?

Mr. Morris: Hardly, Your Honor.

* * *

(Noon recess.)

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[210] AFTERNOON SESSION, THURSDAY, MAY 3, 1962

F. C. FENTON resumed the stand and testified further as follows:

Direct Examination (Continued) by Mr. Gold.

Q. Mr. Fenton, before the noon recess the Court asked a question about stops. I believe when you were reading the claim that you said that you found one element that was not present in the defendants' structure, the 650 clamp, is that right? A. Yes; not literally present.

Q. Do you find anything in the defendants' structure that would perform the function of the element of the claim? A. Yes. The main function of this element which is missing performed a stop service, that is, the spring stop. That is provided here by this additional nub which reaches down from this member and contacts the shank of the plow (indicating).

Q. Are you familiar with the Jeoffroy spring clamp called the HT-5 that has been marked as Plaintiffs' Exhibit C? A. Yes, sir.

Q. Are you also familiar with the Jeoffroy clamp HT-5-A, which has been marked as Plaintiffs' Exhibit D? A. It appears to be the same. If I am familiar with one [211] I am familiar with the other.

Q. Are you familiar with the Jeoffroy structure, which has been marked as Plaintiffs' Exhibit E, and that is the HT-6-AD Jeoffroy number? A. Yes, sir.

Q. Those were the clamps that were involved in the litigation between Graham and Jeoffroy in the past relative to the Graham 798 patent, were they not? A. Yes.

Q. Can you comment as to whether there is any similarity in operation or difference in operation between the defendants' 650 clamp and the Jeoffroy clamps that we have just mentioned?

Mr. Morris: Your Honor, I don't believe there is any issue involved in this lawsuit as between the Jeoffroy clamps and the Deere clamp. The question is whether or not the Deere clamps are in accordance with the teachings of this patent, infringe the claims of this patent.

Mr. Gold: It is true, Your Honor, these clamps here were held to be an infringement in the prior litigation and therefore I think it is of importance to show that the defendants' clamps operate in a similar manner. While the prior decisions are not binding on this Court, I think that this Court [212] should be informed relative to the operation, so you could properly consider the prior decisions in your consideration of this case.

The Court: Of course there is no issue in this case as between the Deere clamp and the Jeoffroy clamp. But in view of the fact of the other litigation concerning the Jeoffroy clamp with the plaintiffs' Graham clamp, I think

it might have some relevancy in this area. Of course it is not binding on the Court and the Court will not accept it as binding.

Q. (By Mr. Gold) Now, can you tell whether there is any similarity in the operation of the defendants' 650 clamp and the Jeoffroy clamps? A. So far as I can tell, and I have watched them operate many times, the Jeoffroy clamp many times, there is no difference in operation. They operate in a very similar manner.

* * *

Mr. Morris: Excuse me. Let me understand that answer, please. Is the testimony, Mr. Fenton, that you see no difference between the Jeoffroy clamp [213] which has just been identified and the Deere 650? A. In operation.

Mr. Morris: In operation?

A. Yes, sir.

Mr. Morris: All right.

Mr. Gold: I have a chart which has been marked for identification as Plaintiffs' Exhibit M.

(Plaintiffs' Exhibit M was marked for identification.)

Q. By Mr. Gold) Mr. Fenton, we have placed on the easel a chart that is marked for identification as Plaintiffs' Exhibit M. Will you tell us what is on that chart? A. In a similar manner, on the left-hand side are the drawings of the Graham patent 798, the center is Claim 1 of the Graham patent, and on the right-hand side is a pictorial drawing of the Deere 100 clamp.

Q. As far as the illustration of the Graham patent drawings and the claim, they are identical to what was on Plaintiffs' Exhibit L? A. Yes, they are identical.

The Court: You say yes, they are identical?

A. Yes, sir

Q. (By Mr. Gold) Then the difference between this chart, Plaintiffs' Exhibit M and the chart, Plaintiffs' Exhibit L, is the illustration of the accused Deere clamp? [214] A. Yes, sir.

Mr. Fenton, I have a clamp that has been identified as Plaintiffs' Exhibit J. Will you look at that and tell

us whether or not that is the structure that is illustrated on the right side of the Plaintiffs' Exhibit M? A. Yes, sir, it is.

Q. Now, if you will take the pointer, Mr. Fenton, and will you read the elements of Claim 1, or read the claim, element by element, and compare it with the Deere 100 spring clamp, pointing out where you find or don't find any of the elements in that structure? A. "In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the frame when the plow is in operation in a forward direction."

The frame is shown in blue and is a box frame, generally known as a square box frame. The shank is shown in green, and is partially cut off here.

"a mounting for pivotally attaching and supporting the shank of the ground working tool to a transverse member of the frame." The mounting to the fixed member in this case consists of three bolts, three heavy bolts, one above the square beam and two below, and of course it is mounted for pivotally [215] attaching as will be shown by the subsequent elements. "the mounting including

"1. a fixed member adapted to be fixed to the transverse member of the frame," shown in yellow, including the bolts and these two separate castings which clamp to the sides of the box.

This fixed member having:

"a. a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed."

Now, on first look at that you would say that element was not present. But upon examination you find that this clamp, without the frame, has no stop engagement whatsoever and therefore it is inoperative without the use of the square member.

Now, when this clamp is fixedly mounted on the square member and is included as part of the fixed member, it has, as specified under "a", "a longitudinally extending underface terminating forwardly of the transverse member to which this said mounting is adapted to be fixed." So with that assumption, I would like to make this very clear, with that assumption, that this square member is

essential to make this an operative unit, because it provides the stop engagement for the spring, we are justified in claiming that this [216] longitudinal extending member under the frame constitutes the element here called for.

"b. ears extending rearwardly from said underface at the sides thereof." They are shown in this drawing at the rear of this right-hand element of the fixed member, an enlargement of that casting to provide the pivot pin.

Q. Will you show us those ears on this structure? A. They are right here (indicating), the other on the other side.

Q. Now, you were speaking of the underface that you were using. Can you also point out the underface on this actual device, that you are referring to? A. This face here, beneath these two lower bolts—between the lower bolts.

The Court: That is the under part of the frame?

A. That is the under part of the frame, yes, sir. But it also provides the stop.

"2. a shank attaching member having

"a. an elongated plate portion provided with

"(1) an upper face corresponding with and normally in contact with said underface of the fixed member." The shank attaching member has an upper face here in the center portion, which is normally in contact [217] with the underface of the square beam which, as we said under the previous element, is assumed to be the fixed member. This is shown in red in this illustration.

"(2) a longitudinally extending underface in engagement with a corresponding upper face of the shank whereby the plate portion of the shank attaching member is between the shank and the fixed member." This hinged member has a longitudinally extending underface which is in contact with the shank, and the hinged member is between the shank and the fixed member.

The Court: Just a moment. In that connection let me ask a question. This hinge or pivot part of the device in the Deere 100 spring clamp, does that fit inside the fixed member or on the outside of the fixed member?

The picture would indicate it would be on the outside of the fixed member.

A. The hinged member fits between these ears of the yellow or fixed member.

The Court: That is what this drawing would indicate. But this picture up here at the top of the—

Mr. Gold: If Your Honor please, that is a longitudinal section, taken through the clamp. It would be just like you would split the clamp right through the middle.

The Court: I see. Very well. That answers [218] my question.

Mr. Gold: And you will note also, sir, that the spring bolt does not show going through a hole in the fixed member in that view because that is taken between the springs. It does go through the bolt into the shank because that is in the center, as you will notice here. So it is just like a plane that cuts right through the center of this clamp.

The Court: That bolt, I guess you would call it the forward bolt that is attached to the shank, that goes through the fixed member and is—that goes through the—

Mr. Gold: The hinge member.

The Court: —the hinge member. Very well.

Mr. Gold: And that is this bolt here (indicating) that goes through the red and the green portions in the cross sectional view.

The Court: The one that is colored in red?

Mr. Gold: Yes, sir. Now, if I may, sir, this is the fixed member on each side where the bolts go through. This flange is on the hinge member. This hinge member extends from between these ears forwardly and then has an upwardly extending portion at the front to which the spring bolts are attached.

Q. (By Mr. Gold) Now, Mr. Fenton, will you proceed with [219] the claim. A. I think I was talking about No. 2 under Element No. 2.

Q. Yes. I believe you had read the sub (1). Now, you are ready to read (2). A. It reads, "a longitudinally extending underface in engagement with a corresponding upper face of the shank whereby the plate portion

of the shank attaching member is between the shank and the fixed member." I believe I had finished that. The underface of the hinge member has a straight face on which the shank fits, and in such position that the hinge member is between the shank and the fixed member.

"3. means connecting the elongated plate portion with the shank for maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion of the shank attaching member." That is the bolt.

Q. Will you speak a little louder? Part of the time you are turning towards the chart on the easel and away from the Court, makes it difficult to hear. A. Element 3 is the bolt shown in gray which connects the red pivoted member with the shank.

"4. a transverse pin pivotally connecting the shank attaching member to the fixed member at the [220] ends of said normally contacting faces and whereon the shank attaching member pivots upon rocking movement of the shank." That is shown here in brown at that point (indicating), also shown here disengaged in the two holes. This is the pivot point of the hinged member.

"5. a coil spring having one end seated on the forward end of the fixed member." This has two coil springs, which fit there on the yellow portion of the fixed member.

Q. Now, when you say the yellow portion, can you give us any better description of what portion you are pointing to? A. Well, it is an extension, a flat extension from the fixed member on the left hand here, portion of the fixed member, which also has these fittings to receive the end of the spring.

"6. means having connection with the forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member to maintain the normal plowing depth of the ground working tool." That refers to the bolts, two separate bolts rather than a U-bolt, nuts and the [221] washers here in

the bottom and nuts on the plate and clips there at the top, so that the spring can be compressed.

Q. And what is the function of those springs and bolts? A. The function of the springs is to draw this end of the shank upward to the stop, to enable you to compress the spring to the desired point so that the ground working tool will operate in the way that you want it to operate.

Q. In your opinion, is each and every element or the functional equivalent of Claim 1 of the Graham 798 patent found in the defendants' 100 spring clamp structure as shown in Plaintiffs' Exhibit M? A. Yes, sir, I do, with the assumptions which I mentioned there in connection with "a" under 1.

(Plaintiffs' Exhibit N was marked for identification.)

Q. (By Mr. Gold) Mr. Fenton, we have had a chart identified as Plaintiffs' Exhibit N, and we have one on the easel. Will you tell us what is on that chart? A. The drawings on either side are the same as on the Claim 1, but here we have the language and statement or Claim 2 of the 798 patent.

Q. Otherwise the chart is identical with Plaintiffs' Exhibit M, except for the claim, is that correct? A. That is right.

[222] Q. Now will you read Claim 2 of the Graham 798 patent and compare it element by element with the Deere 100 spring clamp? A. These first two are all the same. Do you want them re-read?

Q. I think it would be best to read them again, Mr. Fenton. A. "In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the frame when the plow is in operation in a forward direction." This frame shown in blue, shank shown in green, described by this first statement.

"a mounting for pivotally attaching and supporting the shank of the ground working tool to a transverse member of the frame, the mounting including

"1. a fixed member adapted to be fixed to the transverse member of the frame," showing yellow and very firmly fixed by the mechanism provided, the bolts and the shoulders here for clamping that fixed member to

the box member of the frame. This fixed member having

"a. a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed."

Q. Was that the same wording as was in Claim 1, in that [223] part of it? A. Exactly, yes, sir, and I don't know that I can say it exactly as I said it before.

Q. Would you say your comments that you used before would apply to that element of this claim? A. Would apply, yes, sir.

Q. O.K. A. "b. the fixed member having ears extending rearwardly from said underface at the sides thereof."

Q. That is also the same as in Claim 1? A. Also the same, as shown here (indicating).

"2. a shank attaching member having

"a. an elongated plate portion provided with

"(1) an upper face corresponding with and normally in contact with said underface of the fixed member." That face is shown here in this diagram. The front portion of that is the face as shown here to contact the underface of the fixed member and to provide the stop.

Q. And when you said "shown here" you were pointing to the cross sectional view of the Deere's 100 spring clamp? A. Yes, sir.

"b." under the second element, "said [224] shank attaching member having a lug extending upwardly between said ears of the fixed member and disposed at the rear end of the plate portion and above the plane of the underface of the fixed member." We didn't read that in the other case, wasn't on the other claim. But here is the lug in the Graham pivoted member, which extends upward from the plate or the surface of the attaching member. In the Deere 100 clamp this lug extends up here. It is between the parts of the fixed member.

Q. Now, could you say which parts of the fixed member you are pointing to? A. The right-hand section of the clamp of the fixed member, and this opening between the two parts. This lug locates the pivot point at a point

above the plane or contact between the shank and the pivoted member, as shown in this illustration, No. 53, in the Graham patent.

"c" under element 2, "said shank attaching member having depending means embracing the shank at the rear end of said plate portion." This refers to these two bolts and the plate which clamp the shank to the pivoted member, and in the Graham patent it refers to this stirrup through which the shank extends and which provides a support for that shank.

[225] Q. I believe you referred to a stirrup. Could that also be called a loop-like portion? A. Yes, sir, I think that would describe it perhaps better.

Q. And when you were referring to the plate and the bolts, to which structure were you pointing? A. To the Deere structure. The Deere structure does not have the stirrup or a loop-like member. It has a plate and two bolts extending up into the hinged member to which nuts are attached, to clamp this tightly to that member.

Q. Now, will you show us the plate on the cross sectional view of the Deere 100 spring clamp? A. Here (indicating).

Q. The part that you are pointing to is marked red under the green shank? A. Yes, under the green.

Q. Now go to the next element. A. Element 3, "a bolt connecting the forward end of the plate portion with the forward end of the shank and cooperating with the shank embracing means in maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion." That is the bolt in gray at this point, which bolts the forward end of the shank to the fixed [226] member, that is, it cooperates with this embracing means, keeping these two parts in contact.

"4. a pivot pin extending transversely through said lug and carried by the ears with the axis thereof above the plane of the underface of the fixed member whereby the normally contacting face of the shank attaching member immediately moves out of contact with and away from the face of the fixed member when the shank attaching member pivots upon rocking movement of the shank." The pivot pin is shown in brown. Here it is,

and it is shown at that point (indicating). It connects these two parts, that is, the hinged member and the fixed member together forms the pivot. I take it that this "immediately moves out of contact" means that there is no side motion or lateral motion, it just moves right away when the action occurs.

"5. a coil spring having one end seated on the forward end of the fixed member." This is the same as in Claim 1. The coil springs are seated on the forward end of the fixed member shown here in orange. Here are the springs, here they are mounted (indicating). The mounting is provided by these special washers or clips at both the bottom and the top.

[227] "6. means having connection with the forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member." Refers to the bolts, of which there are two in number, which pass through the fixed member—I mean pass through these holes in the hinged member and are bolted to—passed through the springs and through the top at that point.

I should point out here perhaps the difference between this and this (indicating).

Q. I want to ask one more question first. You mentioned some washers on which the springs were seated. Are those separate washers that you had reference to or is that part of the fixed member? A. This is machined now, the fixed member—on the top of the fixed member, or cast I should say, so that the spring will fit on that portion.

Q. Now, having read the elements of Claim 2 and compared them with the defendants' 100 spring clamp structure, in your opinion can each and every element of Claim 2 or its functional equivalent of the Graham 798 patent be found in the defendants' 100 spring clamp structure? A. Yes, sir. Certainly the functional equivalent is found.

[228] Q. Mr. Fenton, I will expose the chart, Plaintiffs' Exhibit L, on the easel. You testified regarding

Claim 1 and the 650 structure earlier. In your opinion can each and every element or its functional equivalent of Claim 1 of the Graham 798 patent be found in the defendants' 650 spring clamp structure? A. Why, I testified before lunch that that element cannot be read literally on this other element, on the Graham, can't be read on the Deere, because it is slightly different. They have provided a slightly different stop arrangement, but you cannot claim that they are the same literally. I claim they function similarly and perform similar service, but they are not quite the same. If you are reading the letter of the patent, strictly speaking, they don't quite fit.

Q. What would you say relative to the functional equivalency of the elements of Claim 1 relative to the 650 spring clamp? A. There is no difference in function. Actually, as far as the clamp is concerned it makes no difference whether it provides a stop on the shank which is bolted rigidly to the hinged member, and it is so stated in the patent, that it is bolted firmly to the hinged member. Whether you put your stop on the hinge member or the shank makes no difference in functioning. [229] Mr. Gold: You may ask the witness.

Cross-Examination by Mr. Morris.

Q. Mr. Fenton, you have just completed testifying here as to interpretation of the claims of the patent in suit, the elements of those claims and the reading of those claims upon the two Deere structures. I wonder if I might ask you what you have done in the way of preparing yourself to determine a proper interpretation of those claims. Just tell me in your own words what you have done in the way of preparing yourself to analyze and determine the meaning of those claims and apply them to various structures. A. During the 20 some-odd years that I have been serving as witness on these cases, of course I have had to study claims a lot, and interpret claims. I suppose that was my main education. But I also have watched this device work and witnessed the way it works and where the stop is.

Q. Of course, Mr. Fenton, you have never witnessed the 798 structure operate, because it has never been made

by Mr. Graham or the plow companies, and that is stipulated here in this case. So you have never seen one of those, have you? A. Why, we have a Chinese copy of the patent that has been [230] made by Jeoffroy and it operates the same.

Q. You have seen someone else's, the Jeoffroy structure? A. Yes, sir.

Q. Which has been held by a court to infringe. But that is all that you have seen in the way of operation, which you can say is in accordance with the teachings of these claims, isn't that true? A. Yes. But it is just like it.

Q. All right, let's assume that to be true. The courts have so held. What else then have you done to prepare yourself to interpret these claims? A. Well, lifetime work in machines.

Q. You have told us that already, your years of experience. A. I am telling it again right now, because you have asked me.

Q. All right, sir. Well, I ask you what else. You have told us that. Now what else have you done? A. It is necessary for me to know the functioning of machines, the way they operate, in everyday work, you see.

Q. Yes, the functioning of other machines in everyday work? A. That is right.

Q. Do they tell you something about the interpretation of these words in these claims? A. Why, I certainly think so. It gives you an understanding [231] of machines and the way they operate.

Q. Have you studied the prior art? A. Yes, sir.

Q. Have you studied the prior art as it bears upon a proper interpretation of these claims? A. Yes.

Q. Have you studied the file history in this case? A. Yes.

Q. The history of its progress through the Patent Office? A. Yes, sir, as reported.

Q. Of course you don't know what occurred in the conference between the lawyers and the examiner? A. That is right.

Q. But as far as the file reflects, you have read that you say? A. Yes, sir.

Q. All right. So you are drawing upon your 20 years of experience in testifying and your experience in a lifetime of engineering, and your study of the prior art, and your study of the file history, and the language of these claims. Is that correct? A. That is right.

Q. All right. Now, Mr. Fenton, I would like to get a few matters out of the way here that have been perhaps placed in the forefront that might be confusing as to [232] their significance in this case.

First of all, the matter of chisel type plowing, as it is called, that is something that has existed long prior to the spring clamp that is in issue in this case, hasn't it? A. Somewhat previous, yes.

Q. Well, I believe you stated this morning that in your own personal experience you folks out there at the college had had a chisel type plow for 20 years approximately, and of course there in Kansas, the western part of Kansas, your plow didn't have any spring clamps on it, did it? A. No, not the first number.

Q. The first ones that you had long before these spring clamps had fixed type or rigid type clamps whereby the shank was attached fixedly or rigidly to the transverse frame member of the plow, did it not? A. That is right.

Q. Now typically back in the older days, the shank size was in dimension three quarters of an inch in thickness by two inches in width, was it not? A. Well, it varied in size.

Q. In the older days is that not true?

Mr. Gold: If Your Honor please, I think he should make himself clear as to what date he is [233] talking about, what period of time, be specific.

Mr. Morris: I have identified the time as before the origin of this spring clamp in issue here.

Q. (By Mr. Morris) Back before that time, that means before—I think a date in 1950, was the origin of this clamp. Was the common shank that was used in your experience the three quarters inch thickness by two-inch width? A. There were a number of different types

of shanks used. I wouldn't testify that they were all like that.

Q. Well, I didn't ask you if they were all. I asked you if that wasn't the typical plow. A. They are heavier now than they were in the earlier days. I will agree with you on that.

Q. So in your first experience with them you started with the lighter or smaller size shank, did you not, and over the years those have progressed in size until nowadays the common size shank that is in use is the one-inch thickness, is that not true? A. Yes, one by two.

Q. One by two. All right. Now, the shanks, the original type, the three quarters inch thickness by two-inch width, had in themselves a certain amount of resiliency or spring, did they not? A. Yes.

[234] Q. So that the shank in its operation in the ground, in its cultivating or plowing operation, would have a certain amount of flex or resiliency to flex and return to position, flex and return to position. Isn't that true? A. Certainly.

Q. All right. And the same thing is true with the heavier sized shanks that are now in use, to some extent? A. Yes, sir.

Q. Though perhaps less total resilience than the smaller dimension shanks. Is that correct? A. Yes.

Q. Now then, also the radius of the shanks has changed over the years, in the initial stages 20 years ago the typical radius was a short approximately 16-inch radius, wasn't it? A. There may have been some like those.

Q. Well, you recall those from your testimony in the first Jeoffrey case, don't you, 11 years ago? A. I don't think they were quite that small.

Q. They were smaller in any event? A. They were smaller.

Q. And as the years have gone by the radius of the shanks has lengthened up to 22 inches and even up to 32 [235] inches radius, is that not true? A. Yes.

Q. All right. So insofar as that matter of the plow tool is concerned, the shanks, the shank sizes and the resilient performance of those shanks, that exists regard-

less of spring clamp mountings, does it not? A. Yes, sir.

Q. All right. And today in your own country, that is, typically, the great southern plains area of the country where there are no rocks, the typical mounting of these resilient shanks to the transverse spring members of the plows is by means of a rigid type clamp, is it not? A. I can't tell you about that because I have been told, I haven't made a survey, but I have been told that—

Q. Just a moment, I don't what you have been told. I am inquiring about your own knowledge. If you don't know just say so. A. The sale of spring clamps—

Q. If you don't know that just say so, Mr. Fenton. A. I know it but not in a complete way, the whole country—

Q. Do you only know it by virtue of what you have been told? A. No, not only.

Q. You have been out then and made some surveys? [236] A. I have seen some, yes.

Q. Sir? A. I have seen some and I know that farmers have told me that—

Q. I don't want what farmers have told you, Mr. Fenton. I am asking you for your knowledge about— A. The owner of a spring plow telling me, that is evidence.

The Court: No.

A. It is not evidence? O. K.

Q. (By Mr. Morris) Mr. Fenton, I am asking you about your own personal knowledge as to the use of these plows and the clamping means used. Now, you can tell me what you know about it personally, what you have seen. Let's come back to my main question now. From your own observation in this great southern portion of the Great Plains, the predominant fastening means for attaching the shank to the transverse beam of the plow has been the fixed or rigid type fastening rather than the spring clamp fastening, has it not? A. Yes.

Q. All right, sir. You saw the film yesterday here that was shown before we commenced the actual testimony in this case, and you saw that at least half of the scenes there were of the Graham plows with the rigid type clamps, did you not? [237] A. Yes.

Q. All right. Now then, the rigid type clamps and the type of plowing done by these plows and the performance of the resilient spring shank itself is not an issue in this case, is it? A. No, I think it is not.

Q. It is not. We are talking about a structure of a clamping mechanism for clamping the shank to the frame of the tool, are we not? A. Spring clamp.

Q. All right let's say spring clamp. That is what we are here to deal with, isn't it? A. Certainly.

Q. And all of this history then about who may have been first or a pioneer or otherwise, doesn't have anything to do with the issues upon which you are here to testify, does it? A Probably not.

Q. O.K. Thank you, sir. Now then, I would like to get us oriented completely with some terminology at the outset, so that you and I will be sure we are talking about the same things. We have had some difficulties in past times of understanding each other perhaps, and I would like to avoid any misunderstandings insofar as possible. [238] Let's consider the plows from a general description standpoint. All of them that we have been talking about may be described as having a mobile frame, may they not? A. All that we have been talking about, yes, sir, except your tool bar.

Q. The tool bar— A. Is mobile.

Q. —the one which was integrally mounted to the tractor, it was mobile only in the sense of being attached to the tractor which in turn was mobile? A. Yes.

Q. But typically the type plow we are talking about has a mobile frame, does it not? A. Yes.

Q. And typically it has a transverse frame member? A. Usually.

Q. Or more than one, several transverse frame members? A. Yes.

Q. Now, the tools, the ground working tools that are mounted on those plows normally are mul'iple, are they not? A. Yes, sir.

Q. It is very rarely that you just have one ground working tool mounted on this type plow, and these plows

[239] use, as has been shown here already, a variety of types of ground working tools, do they not? A. Yes, sir.

Q. So it is not accurate to describe these implements as just chisel plows, is it? A. No.

Q. That is just a name which somebody has happened to select and has popularized, but that is not by any means confining or controlling, is it? A. Well, the majority were chisels in the earlier days.

Q. In the earlier days, at the outset when Mr. Hoeme and Mr. Jeoffroy down there first started, that group of people, they had chisel points on these plows, but as they have come to be used, they use chisel points, they use spikes, they use sweeps of varying widths, anywhere from 12 inches to 32 inches, they use devices some places called a duck foot, or some places called a shovel, to do a variety of types of ground tillage, don't they? A. Yes, sir.

Q. And when they are operating with the spikes or chisel points, generally speaking, they plow or cultivate, whatever you want to call it, and I am not particularly concerned about that—in any event, they penetrate the ground somewhat deeper than they do [240] with the sweeps or shovels or duck feet attachments, don't they? A. That is quite right.

Q. With the chisels and spike points in your own territory I dare say the plowing depth or chiseling depth average would be somewhere around seven or eight inches, would it not? A. Yes, sir.

Q. And in the northern countries, at least in the areas where the rocks are not so severe that they can't go that deep, it would be typically about the same with their chisel or spike operation, would it not? A. It might be.

Q. In many areas because of the type of ground, excessive rocks and so on, they may not be able to go quite that deep even with the chisels, is that true? A. That is right.

Q. Now then, upon occasion of course I recognize that these devices have been used for a deeper soil penetrating type of action, in which they may be even put down as much as 12 or 14 inches if the tractor power is sufficient to hold it and if the ground conditions are such that the

point can penetrate. That is true, isn't it? A. Yes, I think it is true, yes, sir.

[241] Q. That is a rather unusual operation for the plows, though, isn't it? A. Relatively, in quantity, yes.

Q. Now then, when we shift to the sweep type ground working attachments, such as I have here in my hand—and in order to make this record complete, I would like to identify this as an exhibit. Identify that as Defendants' Exhibit 49.

(Defendants' Exhibit 49 was marked for identification.)

Q. (By Mr. Morris) The sweep which has now been identified as Defendants' Exhibit 49, Mr. Fenton, is approximately what size would you say? A. 12 inches.

Q. You would call that a 12-inch sweep? A. 12 inches wide, yes.

Q. That is a type of ground working attachment which is commonly used on the plows here involved, is it not? A. Yes, sir.

Q. And with that type of attachment the normal plowing depth or normal ground working depth would be in the vicinity of three or four inches, would it not? A. Yes, even a little shallower.

Q. Even sometimes a little shallower, the primary purpose of that type of operation being to cut the weeds, loosen the soil, create the top mulch and cultivate the [242] surface of the ground, is that not true? A. Leave the trash on the surface mostly.

Q. Does the weeding and leaves whatever trash there is sitting essentially upright, does it not? A. Yes, sir.

Q. All right. Of course you are familiar with the fact that the sweep dimensions go on up to varying sizes and I believe on this particular—these particular types of tools up to around 32 inches, do they not? A. Well, eight feet, some of them.

Q. Well, yes, eight feet, but the 8-foot sweeps call for some special attachments? A. Yes. They are not mounted on these plows.

Q. Not mounted on these plows and they don't use these spring clamps that are in issue in this case, do they? A. That is right.

Mr. Gold: If Your Honor please, I believe it would be best that the source of this sweep be identified. It is a Graham manufactured sweep.

Mr. Morris: That is perfectly satisfactory.

Q. (By Mr. Morris) With all of the sweep type attachments, would it be proper to call the ground working that is done a cultivation, a cultivating operation? A. Oh, yes, I think it is in part at least. It may be also called a fallow operation which is not strictly [243] cultivating because there is no crop there, but it cultivates the soil.

Q. From your experience, Mr. Fenton, let's take a given farmer, do you know whether he would more likely use his Graham-Hoeme plow or his Jeoffroy or his Deere plow more often for the cultivating type work with the sweeps or more often for the chiseling type work with the chisel points? A. Depending on how much he summer fallows. He will use these sweeps more for summer fallowing than he will chisel type. But in the preparation for crop, early spring soil preparation, he probably will use the chisel point. So it depends on his farm management and his organization.

Q. Does it depend on his locale? A. Yes.

Q. Depend on his moisture conditions, weed conditions, and whatnot, will it not? A. Yes.

Q. Would you think it would be fair to say that these tools are used as frequently for the cultivating type of operation with the sweeps as they are for the plowing operation with the chisels? A. I don't have any data on that, actually. Over the country as a whole.

[244] Q. In your own experience, your own observation, what would you think about that? A. Summer fallow with the sweeps is a newer thing, and it isn't as widely accepted yet, but it is growing, and just how far it has grown I can't say. But I would be inclined to say, if I am asked for an opinion, that the chisels are used on more acres at the present time than the sweeps.

Q. Now, you have of course seen both the fixed type or rigid type clamp in use on these plows, and you have seen the spring clamp type of clamp on the plows, have you not? A. Yes, sir.

Q. You have testified, as you have already said, in three other proceedings involving spring clamps, have you not? A. Yes.

Q. And the first one in which you testified involved also the rigid type clamp attachments, did it not? A. That is right.

Q. Is the spring clamp type of attachment any more important or does it perform any different function when the plow is using a chisel point as compared to when it is using the sweep? A. Yes, I would say so.

[245] Q. The spring clamp performs a different function? A. Somewhat different.

Q. What is that difference? A. The sweep will not operate under extreme pumping movement. It gets out of line and it is a scratcher rather than a cultivator, and for that reason it musn't be operated under conditions where it pumps or turns as much, you see. So that is the difference, I would say.

Q. Does that make a difference in the performance of the clamp? A. No, not the clamp.

Q. My question is, if the plow is using a chisel on one hand as compared to a sweep on the other hand, does that make any difference in the spring clamp attachment or its performance? A. Well, the point I am trying to make is that in order for the sweep to operate you musn't have the same pumping action as much as you may have with the chisel. So you either set the springs down tighter or—of course it don't operate as deep and that won't make it vibrate so much. So there is that difference there.

Q. Well, would it be your view that if the sweep is on the end of the shank, and that is what we are doing, [246] is a cultivating operation, that we don't need the spring clamp? A. Not as much.

Q. You think you could get by pretty well without it? A. In fact, you don't want it to move because it gets out of line and it acts as a rooter and not a slicer, see?

Q. Have you been up to the north country, Mr. Fenton, where the rocks exist in the fields, and observed the plows in operation with the sweeps on them. A. No, I

haven't, not in this territory. But I have been in a lot of rocky countries.

Q. Well, yes, I suppose we have all been in some rocky countries, but the question is have you seen these plows operated with the sweeps on them in rocks? A. No, I haven't.

Q. Well now then, your testimony about what happens to it in the rocks with the sweep on is purely theory, isn't it? A. Aside from a few demonstrations.

Q. Well, the few demonstrations that you have observed, conducted in connection with the last trials, were rather unrealistic, in which you saw the plows plow into a concrete block or mound of concrete for test purposes? That is the situation, isn't it? (247] A. Yes.

Q. And as a matter of fact, those tests were conducted with chisel points on the plows rather than sweeps, weren't they? A. Yes.

Q. So the real fact of the matter is that you haven't seen any of these plows work in the rocks with the sweeps on them? A. That is right.

Q. All right. So you don't really know then whether it is necessary for the shank to pivot and for there to be an effective spring clamp mechanism in the rock country when the sweep is used? A. I know that a sweep doesn't function when it pivots very far. That is the only point I am making, whether it is in rocks or in clear soil, it doesn't function properly.

Q. The real point you want to make then, Mr. Fenton, is that when a sweep is on there, there is not as much need for it to pivot through a greater range and return, is that right? A. I don't want it to pivot through a greater range except to release the rock, of course, to avoid breakage.

Q. Isn't that what this device is for, a release mechanism [248] to release it when it encounters these immovable obstructions, rocks and so on? A. That is only one of the objects.

Q. What is the other? A. The other is to make what we call a pumping action, a vibratory action, which is considered to be beneficial in plowing.

Q. Do you find that in the patent, in this patent? A. The action is there in the patent, yes.

Q. Do you find that stated as an object in the patent? A. Yes, I believe it is stated in one of the Graham patents.

Q. Yes, in one of the Graham patents, in the original 811 patent, which is not in issue here, of course there was terrific language about pumping action. But do you find that as a defined function or object or purpose of the clamp in this case? A. I will have to reread it to answer you. (Examining document).

I doubt if it does give you in the original preliminary statement, though it does say that it provides for a—"whereby the shanks may rock when necessary."

Q. Yes, when necessary. And I wonder what we mean by normal operating position, as it is defined in this [249] patent. A. Well, the design of the chisels is such that they work best when they are in a certain position, have a little suction and that would be considered normal operation. Now, a chisel would work in—

Q. Now, just a minute. Listen, please, to my question. Now I am not talking about normal operations in general, I am talking about normal operating position. We have in these claims th of the language normal operating position, we have it in the specifications of this patent? A. Yes.

Q. Now, what do you understand is the meaning of normal operating position? A. When the chisel is in the position with regard to the vertical and horizontal direction so it will cut the soil, stay in the ground, dig it up.

Q. And in this patent we might say that means home base when the shank and hinge member back up here are in contact so that the top of the hinge member or shank attaching member is in contact with the underface of the fixed member? Would that be accurate? A. Well, that is part of it.

Q. That is what the patent talks about when it says normal operating position, doesn't it? [250] A. No.

Q. It isn't? A. Well, as far as the clamp is concerned, yes.

Q. All right. A. But not the tool. You are asking about the tool, the shovel.

Q. No—well, maybe I did. If I did, I didn't mean that. Let's talk about normal operating position of the clamp and the attachment of the shank to the clamp. What do you understand to be the meaning of normal operating position as it is set out here in the claim? A. When the spring holds the shank up against the stop which is provided.

Q. All right. Would it be fair to say that that indicates what would be called the normal operating position of the tool? A. Of the clamp.

Q. Well, if the clamp is in that position, is the forward end of the shank likewise in that position? A. That depends on the hitch and on the tractor and the levers.

Q. The forward end of the shank is controlled by those things? A. The tool. You get me mixed up. You mentioned the tool.

Q. I don't believe I have used the word tool, have I, Mr. [251] Fenton? A. Shovel.

Q. I said shank. All right, let's back up. I see that we are getting where— A. We don't have any argument. We agree.

Q. Well, I wouldn't want you to go that far and say that we agree all the way through on this matter, but I do want to find out some particular things. What precipitated this discussion now was your use of the term, pumping action, and we have concluded now, that this patent doesn't state anything about an object or purpose being a pumping action. It talks about permitting this shank to operate or rock when necessary, doesn't it? A. That is right.

Q. All right. So really and truly when we are talking about a spring clamp here we are talking about a clamp which will hold the shank in its normal operating position and permit it to pivot or rock when necessary. Isn't that true? A. I think that is true.

Q. All right. Now then, with those generalities out of the way, I would like to consider with you some of what came before this 798 patent in the way of spring clamps

You of course are thoroughly familiar with the [252] Graham type of spring clamp which was covered by the Graham 811 patent, one of which I hold in my hand and has been identified as Defendants' Exhibit 6 in this case. A. Yes, sir.

Q. You have studied those for testimony in the first Jeoffroy case, you have watched them in operation, and I am sure that you feel that you thoroughly know the operation of this clamp, don't you, Mr. Fenton? A. Except that I have forgotten much of it.

Q. Well now, this constitutes a part of the prior art which was cited by the patent examiner in the history of this patent, 798 patent, it constitutes a part of the prior art which has been cited by the defendant Deere in this case. Do you mean to tell me that you have not studied the construction of the 811 clamp and the devices as shown by the 811 patent in preparation for testimony in this case? A. No.

Q. You have not? A. No. You asked me if I had not and I said—my answer is no, that I have studied.

Q. Oh. All right. Then you have refreshed your memory and you have studied the clamp? A. Yes, sir.

[253] Q. And the patent, again in preparation for your testimony here? A. Yes.

Mr. Morris: All right. I would like, if we may, to put on the easel some colored enlargements of the drawings from the 811 patent, which we have here identified as Defendants' Exhibits 14-A, 14-B and 14-C, for consideration along with the Graham 811 clamp, Defendants' Exhibit 6.

For purposes of the record, so that everyone will know what we are talking about, Defendants' Exhibit 14-A is sheet 1 of the three sheets of drawings from the 811 patent; Defendants' Exhibit 14-B is sheet 2 of the three sheets of the 811 patent; Defendants' Exhibit 14-C is sheet 3 of the three sheets.

I am going to dismantle the 811 clamp, Defendants' Exhibit 6, for ease in discussion.

Q. (By Mr. Morris) Now if we may, Mr. Fenton, let's consider this 811 clamp from the standpoint of its basic

mechanical elements, the mechanical elements which make up the structure.

First of all, of course, I think it would be understood that the clamp fits upon the transverse frame member of a plow. Is that true? A. That is true.

[254] Q. And in this particular instance the clamp was designed to fit upon the lower flange of a type of beam which is commonly called an I-beam or an H-beam? A. Yes, sir.

Q. The beam having an upstanding web portion and another top portion. The portion of the clamp which I am holding in my hand that attaches to the beam of the plow would be commonly called a fixed clamp member, would it not? A. Yes, sir.

Q. That is the part of the clamp which is fixedly attached to the beam of the plow to position the shank of the ground working tool in its transverse position on the plow, is that true? A. Right.

Q. Now then, a second operative element of the Graham 811 clamp is what is called in that patent a fulcrum plate or might be called a hinge member or shank attaching member? Would that be accurate? A. We have called them all three of those things.

Q. To be strictly in accordance with the language of that patent, it is called a fulcrum plate? A. Fulcrum plate, yes, sir.

Q. But each of the other terms you would agree would be equally applicable, would you not? [255] A. Yes, sir.

Q. A third element, which I have not removed from the device, would be a pivot pin, which in this instance in 811 is located at the rear of the clamp portion, is it not, or the fixed portion of the clamp? A. Yes.

Q. A fourth element would be the coil spring, or if we want to not be specific about a coil spring we could just call it a spring means, that would be accurate, would it not? A. Yes, sir.

Q. Finally then we have the rod element which transmits the pressure of the spring, at the bottom end, into the movable member and shank, on the top end by means

of a washer and bolt, and in turn the seat of the spring on the fixed member into the fixed member, would that be accurate? A. Yes.

Q. All right. Now, as another element, of course it is not, strictly speaking, an element of the clamp itself, the element is the shank, of course, which goes into the clamp, it is the plow element which is clamped to the frame by means of this clamp, is it not? A. Yes, it is the thing you are trying to work.

Q. Would it be fair to say, Mr. Fenton, that broadly [256] speaking, those are the mechanical elements present in the 811 structure? A. Attaching means of the fixed member to the frame, you didn't mention that.

Q. Oh, I didn't mention the set screw which fastens the fixed member to the frame of the plow. I suppose that would properly be a part of the fixed member, would it not? A. Yes.

Q. Now then, referring to the drawings which are on the easel, the colored drawings on the easel, and let's look in particular at Defendants' Exhibit 14-B, using consistent color scheme throughout, the transverse frame member has been colored purple, has it not? A. Yes, sir.

Q. Step down if you can't see it from there. It is purple? A. Yes.

Q. The fixed clamping member has been colored in yellow? A. Right.

Q. And the pivoted clamp member or fulcrum plate has been colored in green? A. Yes.

Q. The shank itself has been colored pink? A. Yes.

[257] Q. The spring means is colored orange? A. Orange, yes, sir.

Q. Then the rod means, which transmits the spring pressure, has been colored brown? A. Right.

Q. You may return to the witness stand.

One point I would like to bring out here, Mr. Fenton, on the particular exhibit which I hold in my hand, the body portion of the clamp Defendants' Exhibit 6, we have some upstanding brace members at the rear, which are not shown in the drawings in the Graham 811 patent. That is true, is it not? A. Yes.

Q. Of course that wouldn't change anything we have said about the definition of these parts, would it? A. Well, it depends upon how you develop them. That is a brace clamp there.

Q. On the rear, these upstanding portions are brace elements, are they not? A. Yes.

Q. They still constitute a part of the fixed clamp member, do they not? A. Yes, sir.

Q. Now then, I wonder if we might look at the elements of that clamp more specifically in terms of the more [258] specific defining of each of the elements. Let's take again our fixed member. Could that be accurately described as having a forwardly extending portion to provide a spring seat? A. Yes, there is provided there a spring seat.

Q. Well now, I want you to follow my language. Would it be accurate to describe this body portion of the clamp of 811 as having a forwardly extending portion which provides a spring seat? A. Yes.

Q. That is shown in the 811 drawings, of course, the forward portion of the yellow member, is it not? A. Right.

Q. Would it further be accurate to describe this member as having a longitudinally extending underface? A. It would seem accurate to me to have it.

Q. You would be satisfied with that? A. Yes, sir.

Q. Then at the rear it has ears? A. Yes.

Q. Ears which are designed to accommodate a pivot pin? A. Yes.

Q. Now, in this particular instance those ears might be described as somewhat downwardly extending anyway, might they not? [259] A. Yes, sir, from the horizontal surface.

Q. Downwardly extending from the longitudinally extending underface? A. Yes.

Q. Now then, turning to the shank attaching element, could it be accurately described as having an elongated plate portion? A. Yes, the upper face is an elongated plate portion. Well, the whole thing is an elongated plate portion.

Q. And having an upper face which would normally correspond with the underface of a shank member? A. It could and does.

Q. Well, as it is situated and oriented in this particular device, is that true? A. That is right. That is true.

Q. The shank attaching member also having at its forward end a depending recessed lug to accommodate the head of a T bolt? Would that be an inaccurate description? A. No, sir, that is accurate.

Q. And at its rear end another depending lug with a recess or groove for accommodating a pivot pin? A. Right.

Q. The pivot pin element, of course, is strictly that, it is a pivot pin, but how would you describe the function or purpose of that pivot pin? [260] A. It is to provide the pivot around which the shank attaching member pivots and to transmit the pressure from the shank through the shank attaching member to the fixed member.

Q. It is a pivot pin then designed for mounting or connecting the shank attaching member to the fixed portion of the clamp? A. That is right.

Q. Now, the spring in this instance, the spring used in 811 is a coil spring, and in its orientation in the structure would it be accurate to describe it as seated upon a forward extension of the fixed member? A. Yes.

Q. And having connection on that end with the fixed member? A. Certainly it bears on it.

Q. And seated or bears on it? A. Seated on it, yes.

Q. And having connection at the opposite end with a washer or nut on the spring rod? A. Yes.

Q. Then the spring rod itself, to define it more specifically, this particular spring rod has a T-shaped head on the bottom, does it not? A. Yes.

Q. And that T-shaped head is positioned in the recessed [261] groove at the forward end of the plate? A. Correct.

Q. And on its opposite end—well, let's take it through its intermediate steps. That same rod passes through a registering opening of the hinge member, the shank, the hingerod then passing through registering opening, in the hinge member, the shank, and the fixed member? A. Yes, sir.

Q. And having connection at its upper end by means of a washer and nut with the spring, whereby the spring pressure is transmitted to the hinge member, shank and fixed member, is that correct? A. That is correct.

Q. Now then, Mr. Fenton, you have observed the performance of that type structure and you have observed that it had some deficiencies insofar as wear and that kind of thing was concerned. Do you think it would be fair, Mr. Fenton, to say that the 811 clamp was really the launching point from which Mr. Graham's 798 clamp that is here in issue was designed? A. Well, I don't know any reason why I should say that, because I don't know.

Q. Well, you sat through the other cases, did you not, and you heard Mr. Graham testify as to these deficiencies in 811 which he was trying to cure in designing 798? [262] A. No, I didn't hear that.

Q. You didn't hear that? A. No. I heard the discussion of the deficiencies in this clamp, but at that time they weren't designing the 798.

Q. Sir? A. As far as I know they were not working on the 798, at the time of the first case.

Q. I didn't ask you about the first case. You testified about both patents in the second case, didn't you, the second Jeoffroy case? A. I didn't testify on the Cockshutt case.

Q. No, I know you didn't. A. Yes, but of the other Jeoffroy cases.

Q. You talked about both patents in the second Jeoffroy case, didn't you? You testified on both of them? A. Oh, yes, that is right.

Q. All right. Then it is just your testimony that you don't remember what Mr. Graham said as to what he was trying to do in making 798? A. No.

Q. Is that it? A. I don't remember his testimony about that.

Q. All right, I will cover that in another way.

* * *

[263] (Recess.)

Q. (By Mr. Morris) Mr. Fenton, we have just been discussing the structure of the Graham 811 clamp. I

would now like to talk a little bit about its operation. As already pointed out, it was designed to attach the shank of the ground working tool to the transverse spring member of the plow. Now then, as the plow goes forward through the field, this shank in its position on the beam would be—if the direction of travel was the way I am pointing—would be facing this direction, would it not, as I am holding it here? A. Yes.

Q. Now then of course it would be understood that the spring steel shank curves rearwardly and downwardly to the point of the plow tool, whatever it may be? A. Yes.

Q. All right. As it goes through the ground or through the field in that direction, as the plow point encounters a rock of sufficient size to constitute an obstruction, what happens in this structure, this 811 structure? A. The point of the tool, ground working tool, is of course backward and upward, which depresses the spring, causes the front end here, which we are looking at, [264] to move downward until the sufficient movement releases the ground working tool from its obstruction.

Q. And then the spring— A. Allows the spring to return it to its normal working condition.

Q. I have disassembled here, for purpose of demonstration, as to the ground forces which you have mentioned, I have now turned this at right angles, it would be upward and rearward, and that would be a competent force, wouldn't it? A. Certainly.

Q. To pivot the rear portion upwardly and the forward portion of the shank downwardly? A. Right.

Q. Against the spring pressure? A. Right.

Q. When released from the obstruction the spring pressure pulls the end back up and the shank returns to its operating condition? A. Right.

Q. That is what is called the rocking or pivotal action of the clamp, is it not? A. Right.

Q. And in that sense from the standpoint of the pivotal action of the shank, as the plow goes down through the [265] field, could you tell any difference in the world between Graham 811 and Graham 798 or Jeoffroy HT-5, or any of the others? A. Yes, there is some difference. You said any difference.

Q. From the pivotal action of the shank, from that standpoint? A. Actually the pivotal action is the same, but there is a difference as you follow them down the field, likely to be a difference.

Q. The purpose, the over-all purpose of all of these spring clamp structures is to do precisely that same thing, that is, to permit the plow tool to ride up and over an obstruction, permit the shank to pivot, and permit it to return to operating position after the obstruction is passed, is that not true? A. That is the major premise.

Q. All right. Now, again talking about the specific performance—well, before I come to that, what about the action of the ground working tool in the soil? Would you be able to tell any noticeable difference between the performance of the ground work of the tool in the ground in comparing Graham 811 with Graham 798 or Jeoffroy SC-580, Defendants' Exhibit 2, which was the type that was involved in the first Jeoffroy case? [266] A. No material difference, no.

Q. Would you be able to tell any material difference in the performance of the ground tool when we come to the later model Jeoffroy as compared to Graham 811? A. No difference, no.

Q. Or Cockshutt, which was involved in the Cockshutt case, now in evidence here as Defendants' Exhibit No. 1?

Mr. Fishburn: If Your Honor please, this has not been admitted into evidence as yet. We stipulated that this device was in the Cockshutt case, but we haven't consented that it be admitted in evidence. It has been identified in the stipulation, but it is not in evidence as yet.

Mr. Morris: Well, I will offer it in evidence right now, then, Your Honor. The clamp which I hold in my hand has been identified as Defendants' Exhibit No. 1 and as a Cockshutt clamp of the type which was held not to infringe the 798 patent in the Graham versus Cockshutt case.

I offer it in evidence.

Mr. Fishburn: We object to the offer of the exhibit in evidence for anything further than what counsel has stated. If he intends to compare the accused devices with this device we do object for that purpose. The question

here is the comparison of the [267] claims of the patent in suit with the accused devices and not the comparison of the accused devices with some other accused device, as far as infringement is concerned.

Mr. Morris: I offer it at the moment for the limited purpose upon which I just inquired of this witness, as to whether or not the performance of the ground working tool in this type of structure would be noticeably different from the Graham 811 or any of the other spring types, for that purpose only at this time. But I want to further say that it will be offered later in the case for comparative purpose in the same manner in which they sought to compare, in direct examination of Mr. Fenton, the Jeoffroy structures which were held to infringe this patent. They are not binding upon the Court, as the Court has said, but if the Jeoffroy infringing device is to be considered as having a bearing, then certainly the Cockshutt non-infringing device would have an equally pertinent bearing upon the opposite side.

The Court: That would certainly be the opinion of the Court at this time unless some other reason could be advanced, since the Jeoffroy devices have been admitted in evidence, at least they have been used in evidence, I don't know whether they have been admitted into evidence or not, but they have been [268] used, I think it would be proper also to use this other device in the same manner.

Q. (By Mr. Morris) Then coming to my question of you, Mr. Fenton, you have of course observed the Cockshutt clamp—

Mr. Gold: If Your Honor please, this witness did not testify in the Cockshutt case and there has been no showing that I know of that he has observed the Cockshutt device in operation.

Mr. Morris: I will qualify the witness then, Mr. Gold.

Q. (By Mr. Morris) Mr. Fenton, is it your testimony that you have not observed the Cockshutt spring type clamp in operation? A. That is right.

Q. You have not? A. Have not.

Q. All right, sir. Have you studied the structure of the Cockshutt clamp? A. Yes, I have.

Q. You are willing to testify, of course, as to how the 798 structure would operate, even though you haven't seen it, it is just a paper patent. Would you likewise be willing to testify as to how the Cockshutt clamp would operate, from your study of the structures [269] of the clamp? A. For what it is worth, I would say that I would expect it to operate in the same way.

Q. You would expect it to operate in the same fashion, substantially the same fashion? A. Generally speaking.

Q. Would it be fair to say, Mr. Fenton, that all of these spring clamp structures which we have just been talking about achieve substantially the same over-all result insofar as the ground working operation of the tool is concerned? A. I think that is right.

Q. They are basically designed to attach the ground working shank member to the frame of the plow in a resilient fashion, so that it will be maintained in its normal operating position but will be free to pivot under extreme forces and return to its normal position by means of the spring pressure upon the forward end? A. Right.

Q. Now, coming back to Graham 811, we had a somewhat unusual structure in 811 in that the shank member was positioned between an underface of the fixed member and an upper face of the hinge member, and not directly fastened to the hinge member. Is that true? [270] A. That is right. It was not directly fastened to it. I don't know that I agree that it is unusual. That was the structure.

Q. Well, do you know of any others which involve that particular feature? A. No. That was the first one, and it had this structure.

Q. Has this peculiar structure. Now, the means for attaching the shank in this type clamp, the 811 type clamp, was the spring rod. That spring rod performed a dual function of holding the shank against rearward pulls, which of course are the predominant pulls on the shank, and also it performed the function of transmitting the spring pressure from the fixed member to the hinge member to hold the shank in its normal operating position and permit it to operate? Is that true? A. Right.

Q. All right. Now, with that particular type of structure, with the spring rod performing the dual purpose I have just mentioned to you, it resulted in some operating deficiencies or drawbacks, did it not? A. Rather loose.

Q. Is that all? Just the fact that it was rather loose? A. It was subject to wear, I understand.

Q. Well now, you not only understand that, you saw the worn-out clamps which were brought into the courthouse, [271] did you not, Mr. Fenton? A. A few of them, yes.

Q. And you know that as the rod scrubbed up and down in the opening and closing action of this 811 clamp, with the pulling load of the shank back against that rod, that you had a constant scrubbing action of the rod against the rear surface of the opening in the fixed member, did you not? A. Yes, sir.

Q. And the result was that the fixed member would wear clear back at this point right on back to sometimes as far back as the leading edge of the frame member itself, wouldn't it? A. I didn't see that.

Q. You didn't see it go that far? A. Not that far.

Q. Would there also be a severe wear on the spring rod itself where it scrubbed? A. Yes, sir.

Q. As a matter of fact, I would imagine that you have seen them wear in two in the field and shoot out of those things like a rifle bullet almost, haven't you? A. No, sir.

Q. You never did see that? A. No.

[272] Q. Now then, in addition to the wear on this spring rod in that type of structure, did you have some bending of the rod which resulted from these severe pull-back forces of the shank on the rod? A. I am not sure that they did have bending, but I would expect you would have some.

Q. And if the spring rod bent and became distorted so that it did not move freely through the three registering openings, it would tend to bind and not freely open and close the device under the spring pressure, would it not? A. It would bend enough, certainly.

Q. Now then, in addition to that, because of the peculiar structure of this device we had two different pivot points,

the hinge member or the fulcrum plate at its rear end pivoted about the pivot pin, did it not? A. Yes, sir.

Q. The pin was its pivotal axis? A. Right.

Q. The shank on the other hand did not have a pivotal axis about the pin, but pivoted about a point or surface—point would be inaccurate, a surface on the rear heel portion of the fixed member, did it not? A. Right.

Q. So we had the hinge plate having one point of pivot and [273] the shank having another point of pivot? A. Yes, sir.

Q. Now then, that resulted, in order for the device to operate effectively it resulted in a continuous sliding or shifting longitudinal motion of the shank relative to the hinge member, and in turn relative to the fixed member? A. Right.

Q. That then resulted in a severe wear area at the pivotal area on the base of the clamp, did it not? A. Some wear there, yes, sir.

Q. Some wear there. Now then, since we have looked at those operating deficiencies or wear factors in that type of structure, does that refresh your memory any about what Mr. Graham said the purpose was in designing 798? A. No.

Q. It does not? A. I didn't hear it. I really don't think I have heard it.

Q. All right, that is fine. Now then, taking 811, as we have discussed it here, do you feel that we have accurately described the structure and accurately described the operation and the function? A. In the main, yes, but you wouldn't—

Q. Is there some point at which you would like to differ? [274] A. There is one point that I tried to mention before and you wouldn't permit it.

Q. Excuse me, I didn't mean to keep you from it, Mr. Fenton. A. When you follow this device working in the field there is a tendency for the shank to swing laterally somewhat, which is of course another item that may not be important. but it was nevertheless present in this device, especially on the turning, when it turned a corner.

Q. This particular 811 structure, as you mentioned a moment ago, it is a rather loosely connected device, with quite a lot of play in it? A. Yes.

Q. So that down here at the bottom end of the shank, as you turned the corner, you would have a twisting action of the shank and a sliding action which might cause it to do a lot of lateral fishtailing sort of activity as it goes through the ground, is that true? A. Slightly, yes, sir.

Q. Somewhat more than the others perhaps? A. I believe so.

Q. Now, is there any other thing that you would like to bring out that was not described accurately about the operation? [275] A. No, sir. I think it is quite accurate, the description.

Q. I believe there is one action that we probably haven't described. We have described the rearward pull on the shank and the upward force on the shank which tend to turn it around the pivotal bearing surface, described the lateral movement and the twisting movement. In this particular 811 structure you would also have some recoil or rebound action of the shank that would clear the obstruction and the potential or built-up force in the spring shank turn loose and go forward, would you not? A. Yes.

Q. Now I would like to turn to consideration of the 798 structure. Well, before turning to that 798 structure, Mr. Fenton, in the Graham 811 structure what element or elements performed the stop function for the shank to position it in its normal operating position? A. The spring, of course, which urged it upward and the contact between the shank and the opening in the fixed member, the horizontal way or part in the fixed member.

Q. Excuse me, I am not quite following you. Would you state it again, please, sir. A. The spring and the spring bolt of course which urges the shank upward.

Q. Now let's stop just a moment there. Of course the [276] spring and the spring bolt do not perform the stop function, they perform the force which brings it back to stop position, do they not? A. Yes, sir.

Q. They don't actually do the stopping, do they? A. No, no, but they urge it up to the stop.

Q. Fine. That is the force that urges it up to the stop and that is true in all of the structures, isn't it, all that we have discussed? A. All of them.

Q. And all that we will discuss in the spring clamp class? A. Yes, sir.

Q. All right. So then what is it that performs the stop function in 811? A. Contact between the top of the shank and the fixed member.

Q. As shown in the drawings, and we will refer particularly to Defendants' Exhibit 14-B, it is the contact of the longitudinally extending upper face of the shank with the longitudinally extending underface of the fixed member? A. Right.

Q. And as has already been shown here and is evident from the drawings, those matching longitudinally extending faces are what, 6, 7 inches in length? [277] A. 7 inches, relatively.

Q. Roughly. We have identified the four sheets of drawings from the Graham 798 patent, that is, colored enlargements of those drawings, as Defendants' Exhibits 21-A, 21-B, 21-C and 21-D. I have placed—well, there is just not enough room to put them all on the easel. I will just place A, B and C on the easel for the moment. We will consider D as we come to it. Those of course are merely enlargements from the actual drawings of the patent, and you would recognize them as such, would you not? A. Yes, sir, I believe so. I would have to study them a little to see if they are accurate, but I believe they are.

Q. Now I would like to talk with you about structure, and I don't want for the moment to talk about the claims of this patent or even the specifications of this patent. I want to talk about the structure as shown in the drawings of the patent and as shown on these enlargements here. Would you tell me just in your own language what you would consider to be the mechanical elements of the 798 structure as disclosed in the patent drawings? A. The fixed part, which clamps or which attaches the clamp to the frame, that is one part.

[278] Q. That is colored in yellow? A. Yes.

Q. In the drawings. All right. A. Next, the shank attaching member is colored in green, which is just below

the fixed member. The spring and the spring bolts which make the spring effective in urging the—perhaps there are two parts, the spring is one part, the spring bolts and the washers and nuts are another part. That is 4.

Q. The combination of the spring and the rod of course is necessary to perform the function? A. Right.

Q. But insofar as structural elements are concerned, do you think it would be proper to define the spring as an element and the spring rod as a separate element? A. Yes.

Q. All right. A. Then there is the bolt at the front end which attaches the shank-attaching member to the shank or standard as we have called it. That is labeled in a bright blue or emerald.

Q. Well, the fastening bolt you are talking about? A. Yes.

Q. That is a lighter green? A. A lighter green. That is another element. Then of [279] course we mentioned the shank and the shank is an element, although not of the clamp but of the operation of the clamp. We should mention then the stirrup at the back, which is an additional shank-embracing member. That I think is the list.

Q. Would you want to classify the pivot pin as an element? A. Oh, yes, the pivot pin should be classified as an element.

Q. That is colored in blue on the drawing? A. Yes.

Q. Which of those elements, Mr. Fenton, were not present in the Graham 811 structure? A. The fixed member is more rigid, but the element was there in the other structure.

Q. Now let's stop right there and eliminate one little point from contention in this case. The fixed member colored in yellow in the 798 structure has an upstanding bolt at the forward end which bolts to a fastening plate or clip that goes over the top of the H-beam to add rigidity and strength to the fixed member? That is true, isn't it? A. Yes.

Q. And if you have studied the file wrapper and the original claims which were drawn in the original application, I am sure you know that some claims were originally [280] drawn to that element which goes up over the top

of the beam. That is true, isn't it? A. It may have been, yes.

Q. Do you not recall that? A. I don't recall that argument in the file wrapper.

Q. You don't recall that particular element having been fully shown by the Peifer patent cited by the patent examiner? A. No.

Q. In any event it is not involved in the claims of this patent, is it? A. No, I think not.

Q. It does constitute a part of the structure of the fixed member but not involved in the claims? A. That is correct.

Q. So that that element as such is no point of concern in this case, is it? A. No, it is not.

Q. So then we had the fixed member, 798 we have a fixed member and in 811 we had a fixed member. Go ahead, please. A. The bolt which attaches the shank to the end member is an element that doesn't appear in the 811 patent.

Q. The little fastening bolt colored in light green, shown at the forward end, is a new element you say that [281] wasn't present in the 811 structure? A. That is right.

Q. All right. A. Also the stirrup at the rear just below the pivot is a new element in the structure.

Q. All right. And that is the sum total of it, isn't it, Mr. Fenton? We have two new elements or sub-elements, parts of elements, in 798 that were not present in 811, and that is a fastening bolt at the front end to fasten the shank and the hinge member together? A. Yes.

Q. And a depending stirrup from the hinge member at the rear to embrace or support the shank at that point? That is true, isn't it? A. There is an additional slight difference. I don't know whether it would be called an element, but at the rear of the shank attaching member the pivot is actually enclosed whereas in the 811 patent it is just a U-shaped structure that fits over the pin, you see.

Q. Could you point that out to me? I am not with you on that. A. On this shank attaching member, it just fits over the pin. In this part it is actually engaged here.

Q. All right, I understand. The pivotal element of the shank attaching member in 811 was merely a cradle or [282] rocker? A. Yes.

Q. A recessed groove in the plate member? A. That is right.

Q. Whereas in 798 it is a true bearing element, is that what you are saying? A. Yes, completely surrounds the pin.

Q. It is the full bearing with the pin through the bearing? A. Yes.

Q. All right. Now then, is that the sum total of the difference in elements of 798 over 811? A. I think so, yes, sir.

Q. Let's look at it then from another standpoint. This may be saying the same thing, but I want to be certain that we are together on it, and for that purpose I will remove the drawing, Defendants' Exhibit 21-B, so that we may have comparative drawings of 798, which is Defendants' Exhibit 21-A, and of 811, which is Defendants' Exhibit 14-B.

In 811 we have a fixed shank attaching member. In 798 we have—I beg your pardon, I am pointing to the wrong one. In 811 we have a fixed shank attaching member shown in yellow on Exhibit 14-B. In 798 we have a fixed clamp member shown in yellow on Exhibit 21-A. That is true, is it not? [283] A. I don't follow you on that 811 patent. You said you had a fixed shank attaching member?

Q. Let's back up. We have a fixed clamp member. I did say shank attaching member, didn't I? A. I thought you did.

Q. All right. I was wrong about that. We have a fixed clamp member? A. Yes, certainly.

Q. In 798 we have a fixed clamp member? A. Right.

Q. Both shown in yellow? A. Yes.

Q. Both for the purpose of attaching the clamp to the transverse spring member of the plow? A. Right.

Q. In 811 we have a pivoted shank attaching member, shown in green? A. That is right.

Q. In 798 we have a pivoted shank attaching member shown in green? A. Right.

Q. In 811 we have a pivot pin passing through pin supporting areas on the fixed member, the pin being shown in blue? A. Right.

[284] Q. In 798 we have a pivot pin passing through pin supporting areas on the fixed member, the pin being shown in blue? A. Right.

Q. In 811 we have a coil spring seated upon a forward extension of the fixed member? A. Right.

Q. In 798 we have a coil spring seated upon a forward extension of the fixed member? A. Correct.

Q. In 811 we have a spring rod passing through the spring member, bearing on one end upon the hinge member or shank attaching member and bearing on the other end upon a washer and nut on top of the spring? A. Right.

Q. We have the same structure in 798, do we not? A. Except that the lower end bears on the shank.

Q. One difference there? A. Yes, sir.

Q. In 811 the spring rod bears upon the shank attaching member directly whereas in 798 it bears directly upon the shank? A. Correct.

Q. All right.

Q. Then for every element that there is in 811 there is [285] a similar element in 798, is that true? A. Right.

Q. Do you make any distinction, Mr. Fenton, for the connection of the spring rod directly to the hinge member in 811 as compared to the attachment of the spring rod directly to the shank in 798? A. Well, there is a very definite difference there.

Q. It is a different structure, isn't it? A. Different structure. The difference is that in the 798 these two parts, the shank and the attachment, were bolted together, therefore it doesn't depend on the rod to hold them. The rod merely urges it upward by the contact of the spring. As you said, in 811 it has a dual purpose. There is that difference.

Q. Yes. The spring rod in 811 performs both the job of holding the shank against its rearward thrust and also

of pulling it up into operating position or holding it in operating position? A. Correct.

Q. Under the spring pressure. In 798 those two functions are separated so that the spring rod now performs only the job of transmitting the spring pressure to open—to permit the device to open and close? A. Right.

Q. The load-carrying function is now performed by the [286] fastening bolt which fastens the shank and the hinge member together? A. Correct.

Q. So that structural difference does make some difference in the functions of those parts, doesn't it? A. It adds to the rigidity of the structure.

Q. It fastens the shank and the hinge member more firmly together at that point, is that true? A. Right.

Q. Summarizing each and every element—that is, I am talking about broad structural elements now, of course, and not in terms of the language of the claim. Each and every broad structural element that is present in 798 was present in 811 except for the fastening bolt at the front end and the stirrup at the rear end of the hinge member? A. And the change in the pivot mounting.

Q. All right. That is a part of the change of the hinge member of course? A. Yes.

Mr. Morris: Your Honor, I have prepared as Defendants' Exhibit 5 a book of the prior patents which were cited by the Patent Office in this file wrapper history, and also under a separate heading in the same book copies of all of the additional [287] patents which have been cited by the defendant in its answer in this case as prior patents. You have copies of all those patents, I assume, do you not, Mr. Fishburn?

Mr. Fishburn: Yes.

Mr. Morris: At this time we will offer in evidence the Defendants' Exhibit 5, the book of prior art patents.

(Defendants' Exhibit 5 was received in evidence.)

* * *

[288] Mr. Morris: As I understand, the right of cross-examination is co-extensive with the issues in the case, is it not, Your Honor?

The Court: No, the rule we follow here is that cross-examination on issues other than the credibility of the

witness or interest of the witness, cross-examination should be confined generally to the issues raised in direct examination.

Mr. Morris: All right.

Mr. Fishburn: Let me explain, Your Honor, that we did not object to this interrogation regarding the 811 patent because we had mentioned that in our examination.

Mr. Morris: All right. I had understood the rule differently, but that is all right, it doesn't matter, we will come at it at a later time.

Q. (By Mr. Morris) I understand, Mr. Fenton, that in interpreting the claims of the 798 patent which are here in issue, that you have taken into consideration, though, the teachings of the prior art patents as bearing upon a proper interpretation of those claims?

Mr. Fishburn: I object to that as an improper question, Your Honor. I don't think that has any bearing on the question that we are here concerned with, whether he took them into consideration in [289] considering these claims or not.

Mr. Morris: Your Honor, this man has sought to interpret these claims and has sought to apply them to different structures, and I believe at the very outset of my cross-examination of him he stated that in preparing himself for this testimony he has studied the prior art and considered its teaching.

The Court: He stated he had studied the prior art, yes.

Q. (By Mr. Morris) Well, let me ask one further voir dire question. Have you considered the prior art from the standpoint of its bearing upon a proper interpretation of the language of the claims in the patent? A. No, I believe not.

Q. You haven't done that? A. No. I have studied it from the standpoint of prior art which would affect the validity of 798, from the standpoint of validity rather than interpretation of the claims. I think you want to do that self-consciously, but I don't think I had that in mind—

Q. Of course validity, Mr. Fenton, is a legal question which the Court ultimately has to pass on. A. Certainly.

Q. But are you telling me that you have considered the prior art from the standpoint of distinguishing the [290] present claims from the prior art? Have you done that? A. Yes, of course.

Q. And would that not, in turn, affect your interpretation of the claims here? A. I should think so.

Q. It would? A. I should think it would affect it, yes.

Mr. Morris: I have marked for identification Defendants' Exhibit No. 4, which is the file wrapper history of the patent in suit.

* * *

We would like to offer in evidence at this time the file wrapper history of the 798 patent in suit as Defendants' Exhibit 4.

Mr. Fishburn: No objection, Your Honor.

The Court: Very well. It will be admitted.

(Defendants' Exhibit 4 was received in evidence.)

Q. (By Mr. Morris) Have you considered the file wrapper history of this patent, as having a bearing upon a proper interpretation of the claims of the patent? [291] A. Yes, I have read the file wrapper and was very much interested in the discussions, the actions.

Q. Well, I understand that you have studied it, you have read it from the standpoint of trying to arrive at a proper interpretation of scope for these claims? A. You mean the claims of these two questions in suit?

Q. Yes, sir. A. Well, I think so. I don't see how you could avoid that.

* * *

Q. (By Mr. Morris) Then I will turn my attention to the claims of the patent in suit, Mr. Fenton, and for convenience in this discussion I would like to return to the easel Plaintiffs' Exhibit L, which is a claim chart of Claim 1 of the patent, with the Deere 650 structure being shown on the right-hand side of that chart.

[292] Now, you have stated, Mr. Fenton, on direct examination that you found each and every one of the elements as called for in Claim 1, or its equivalent, present in the Deere structure, and I would like to consider with you now, if I may, the language of this claim.

Mr. Gold: If Your Honor please, I believe that Mr. Fenton's statement was that it was the functional equivalent and not really the word equivalent. If you recall, Mr. Morris objected to the use of the word equivalent without further definition, and therefore I used the word functional equivalent.

Q. (By Mr. Morris) I believe that is correct, and I don't want to distort your testimony one iota, Mr. Fenton. Your testimony was that each and every element could be read upon the Deere structure either as being structurally present or as having a functional equivalent? A. I believe that is right.

Q. All right, sir. Let's start off at the beginning here. We say, "In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the frame when the plow is in operation in a forward direction." Now there in the introductory portion of that claim, the frame of the plow is stated and you have colored [293] it blue in these drawings, have you not? A. Yes, sir.

Q. And the frame is not an element of the clamp, is it, Mr. Fenton? The frame of the plow is not an element of the clamp, is it? A. Not normally, but in one of your—well, it is in the other one, you have made it an element.

Q. Well, we will come to that. A. Yes. In this case—

Q. As an engineer, Mr. Fenton, if you took a set of specifications on a plow, and you came to the term, the frame of the plow, you wouldn't construe it as a clamping means for clamping a shank to a frame, would you? A. No, normally it should not be considered a part of the clamp.

Q. It is a part of the plow frame? A. Yes.

Q. It is the thing to which the clamp is attached, isn't it? A. Right.

Q. And the shank again is not really a part of the clamp, it is the thing that is clamped by the clamp, isn't it, or attached by the clamp? A. It causes the shank to function. That is, the clamp [294] causes the shank to function.

Q. Do you want to call it a part of the clamp? A. Pretty close to it I would say.

Q. Certainly it is integral with the clamp and it is described in some of the language of this claim, its function is described and shown, isn't it? A. Yes.

Q. But when you come to the breakdown of this claim into its mechanical or structural elements, do you consider the shank as an element of the clamp? A. I would.

Q. All right. In any event, it is colored in green on these drawings? A. Yes.

Q. Now then, "a mounting for pivotally attaching and supporting the shank of the ground working tool to a transverse member of the frame."

Of course admittedly that is true in the Deere structure, nobody would say otherwise.

Coming to our first element, "a fixed member adapted to be fixed to the transverse member of the frame." Now, if we stop right there, is that element present in Deere 650? A. Certainly.

Q. If we stopped right there is that element present in [295] Graham 811? A. Yes, sir.

* * *

Q. (By Mr. Morris) All right, is it present, Mr. Fenton, in the Cockshutt structure which has been held by the Fifth Circuit not to infringe this patent? A. You are referring now to a fixed member?

Q. Stopping right there, just where I did. A fixed member— A. To be fixed to the transverse member of the frame.

Q. "a fixed member adapted to be fixed to the transverse member of the frame." A. Certainly it is present in the Cockshutt device.

[296] Q. Defendants' Exhibit 1? A. Yes.

Q. Let's pass to the sub-element "a." "Having a longitudinally extending underface, terminating forwardly of the transverse member to which said mounting is adapted to be fixed." What is the significance of that language to you? A. The significance is that it provides the stop for the—the fixed member here must have a longitudinally extending underface to which the other parts of the clamp must be fitted or attached or used as a stop, in most cases.

Q. Can you point me to any place in this patent which even uses the word stop? A. It is not in these claims.

Q. Is it in the specifications? A. It certainly is implied in the specifications.

Q. Well, many things may be implied, but can you tell the Court here at any point where you can find the word stop in this patent? A. I would have to reread it and see.

Q. Do you find any place in the patent where it says that the function of the longitudinally extending underface is to stop the shank? A. Stop the upper movement of the shank?

[297] Q. Does it say that? A. Well, it says in normal contact with the underface, bringing it in normal contact.

Q. That is the language used, isn't it? A. Yes.

Q. Normal contact or normal position? A. Normal contact, which would seem to be a stop contact.

Q. So you in your own mind here have selected this thing and called it a stop function, but do you think that that is a fair interpretation of these words, "a longtitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed"? Now, what I want you to direct your attention to is the language "longitudinally extending underface." What does that mean? A. It means a horizontal member under the—I should say it had to be in horizontal direction.

Q. Well, would horizontal be sufficient, Mr. Fenton? A. Well, it uses longitudinally in relation to the travel of the plow, I believe.

Q. All right, let's orient ourselves again so that we don't get at cross purposes with each other. The direction of travel of the plow is normally what is called the longitudinal direction, is it not? A. Yes, I should think so.

[298] Q. At right angles to that direction is called the transverse or lateral direction, is it not? A. Yes.

Q. Then of course you would have the vertical, which would give us our three planes of movement or structural location, wouldn't it? A. Yes.

Q. All right. So longitudinal, as it is used in this claim, means a face extending in the direction of movement

of travel of the plow, doesn't it? A. That is right. We agree on that.

Q. All right, sir. Do you know how that particular language happened to come into these claims, that is, from the history? Have you searched the history to find out how that particular language came into these claims? A. No, I can't say that I have, but the Graham clamp has definitely and clearly a longitudinal underface.

Q. That is accurately descriptive of the structure of 798? A. Yes, sir.

Q. As shown in the drawings, and as further described in the specifications of this patent, isn't it? A. That is right.

Q. All right. But do you know, Mr. Fenton, that of the first 12 original claims which were contained in this application that there was not one single one of them [299] which defined the fixed member as having a longitudinally extending underface? A. No.

Q. Have you examined those claims? A. I don't recall that.

Q. You haven't examined the file wrapper history then that closely? A. Not that closely, that I remember.

Q. Excuse me, have you finished? A. I haven't examined it closely enough to remember those details now here.

* * *

[301] Q. (By Mr. Morris) Mr. Fenton, if this particular element 1 of Claim 1, defined as "a fixed member adapted to be fixed to the transverse member of the frame," now, if the element stopped at that point, to you as an engineer construing that language, would it mean anything differently than it does if you add the additional language, "and having a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed"? A. Well, the first statement is —there is no question about it, it is there, it is present. Now, the second one of course, which is more specific, I think I will admit it is open to some question whether this underface when it is present there would really and

truly satisfy this statement. But it is the only one there, and it is there.

Q. Now, I am not talking about Deere right now. I am talking about this language of this claim, and your [302] view about interpretation of that language as an expert on structures. Now, does it mean the same thing to you if we stopped off where I stated a moment ago, "a fixed member adapted to be fixed to the transverse member of the frame," as it would if we went ahead and incorporated the rest of the language, "a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed"? A. I am not sure that I understand your question, but the second part, "a", is more specific and further delineates the general statement under 1.

Q. Do you think as an engineer, would it constitute a fair limitation upon the type of fixed member that the claim is talking about? A. There must be a horizontal or a longitudinally extending underface there to satisfy this "a".

Q. That is the way it defines it, isn't it? A. Yes, sir.

Q. And that is exactly what the element provides for, isn't it? A. Certainly.

Q. All right. Now then, you have already testified on direct examination that you do not find that element present in Deere 650, that you do not find a [303] longitudinally extending underface of the fixed member present in the Deere 650 structure? That is true, isn't it? A. No, I don't believe so. The one that isn't present is one under 2. No. 1, under 2.

Q. I will come to that one in a moment. Perhaps I misunderstood you. A. I testified that the bottom of this projection on the fixed member, a small lug extending down, might be construed to constitute a longitudinally extending underface.

Q. You are saying that it might be construed as constituting? A. That was my testimony, as I recall.

Q. Mr. Fenton, do you think it is a fair interpretation of the term "longitudinally extending underface" to apply it to a lug element which is approximately one quarter

inch in width, and if it extends in any direction at all it extends transversely of the clamp member? A. When you consider its function, I think it is fair.

Q. We will come to function in a moment. I am talking about structure now. A. Yes, sir. Well, it is questionable, I will admit.

Q. It is not questionable, it is just not present, is it, [304] Mr. Fenton? A. That part is present, certainly.

Q. Is a longitudinally extending underface of the fixed member present? A. There it is, a quarter of an inch wide.

Q. And you are willing to call that longitudinally extending? A. I am, because it is used functionally for the purpose that the underface is used for in the Graham clamp.

Q. Is it literally present, Mr. Fenton? A. Literally, yes, sir.

Q. Is a longitudinally extending face literally present in this structure (indicating)? A. Certainly, a small face.

Q. And you are willing to say that this depending lug at the forward end literally is a longitudinally extending underface of the fixed member? A. It has a longitudinally extending face on it unquestionably, however small, and it serves—well, you don't want function yet.

Q. No, I don't want function yet. It extends longitudinally would you agree approximately a quarter of an inch? A. A little more perhaps.

Q. Do you think that that is fairly the same kind of a longitudinally extending underface within the meaning [305] of the language of this patent (indicating)? A. I don't think it is of the meaning of the language in the Graham patent, but it fits only that way on the Deere.

Q. Well then, it is not a longitudinally extending underface within the fair meaning of the language of the element, is that what you are saying? A. No, I don't admit that. That is contrary to my testimony this morning.

Q. Well, I understand what you testified this morning. I want to know what you are testifying now. A. The same.

Q. So you are going to stand on the proposition that this lug is a longitudinally extending underface of the fixed

member within the meaning of the element of the claim? A. Yes, sir.

Q. All right. Now then, let's pass on to the sub-element "b", and to introduce it I will pick up the words from sub-element "a", "the fixed member having ears extending rearwardly from said underface at the sides thereof." Now then, what underface is that language talking about? A. That would be the underface of the fixed member, of course. That is a sub-head under the fixed member.

Q. That is talking about this same longitudinally [306] extending underface of the 798 structure, isn't it? A. Yes.

Q. And in 798 that is accurately descriptive, as shown in the drawings, isn't it? A. Yes.

Q. Transfer your thoughts to the Deere 650. You have picked out the ears, of course, as being the pin receiving hole in the rear portion of the body casting, have you not? A. Right.

Q. Now then, where is that hole in Deere rearwardly extending from any longitudinal face? A. Well, it is the rear of the face which we just discussed under "a", four or five inches.

Q. It is behind the lug which you say is the longitudinally extending underface, and therefore do you think that this fairly responds to the language of that claim that the ears are rearwardly extending from said underface? A. Yes, they are rearwardly extending, and they are attached to the same member, they are part of the same casting.

Q. But what is their association with this underface of the fixed member? A. Well, this doesn't call for any association.

Q. Doesn't it? [307] A. No.

Q. What do you understand by the term "rearwardly extending from", if that is not an association? A. Simply locates them, locates the ears.

Q. It doesn't tell you as an engineer anything about its position in relation to that underface? A. Simply extending rearwardly from said underface at the sides thereof, and there they are, attached to the same member along the side walls of the member.

Q. All right, let's pass on then to the next element, Element 2, which of course is the shank attaching member, and its introductory part, element 2, "a shank attaching member." Of course if we stopped right there the shank attaching member is present in Graham 798? Is that true? A. Certainly, it is present.

Q. It is true in Graham 811? A. Yes.

Q. It is true in Jeoffroy SC-580, Defendants' Exhibit 2? A. Yes, certainly has a shank attaching member.

Q. It is true in Cockshutt, Defendants' Exhibit 1, which was held not to infringe by the Fifth Circuit? A. Your question is, is the shank attaching member present?

Q. Yes. A. Certainly.

[308] Mr. Fishburn: Your Honor, I would just like to call your attention to the fact that this is not prior art, this Cockshutt device is not prior art in the same sense that these other devices are concerned to this patent in suit.

Mr. Morris: It is not offered as such, Mr. Fishburn. It is offered as bearing upon interpretation.

Mr. Fishburn: I just wanted the Court to understand that that is not prior art.

Q. (By Mr. Morris) All right. So then if this shank attaching member is to be distinguished from the shank attaching member in Graham 811 or in Jeoffroy SC-580, or in Cockshutt, it must depend upon some of the additional language with which that element is defined, mustn't it? Do you agree with that?

Mr. Gold: If Your Honor please, I believe Mr. Morris in his question also stated he would have to distinguish from Cockshutt. He just got through saying he admitted the Cockshutt was not prior art. I believe if you will have your question read back you will find it improper.

Mr. Morris: What is your objection?

Mr. Gold: That you are asking him if he doesn't have to disinguish from the Cockshutt device, which is not prior art in this case.

[309] Mr. Morris: All right. Of course that is a validity analysis and I wasn't intending to use it in that fashion, but I will break it in two parts.

Q. (By Mr. Morris) If the shank attaching member in Graham 798 is to be distinguished from the shank attaching member in Graham 811, or if it is to be distinguished from the shank attaching member in Jeoffroy SC-580, which are two elements of the prior art, then it must depend upon some of the further language in the claim which defines the element, mustn't it? A. Probably. I am not attempting to distinguish this thing, I am simply saying that they are present there or in the original testimony that this shank attaching member was present in these two patents.

Q. Yes, I understand that, Mr. Fenton, but I am trying to find out now what that means, what this element means. Let's get back to my question, please, sir. A. There are additional describing elements.

Q. Let's solve this one problem first. If we described the shank attaching member broadly as a shank attaching member and stopped right there, then it is equally present in Graham 811, Jeoffroy SC-580, any number of others, isn't it? A. Certainly.

Q. So that if the element is to be distinguished in this [310] claim from those prior devices, then it must depend upon the additional language describing the element in this claim, mustn't it? A. Well, I think so.

Q. All right. Then does that mean to you that this additional language should be given some significance? A. Certainly.

Q. All right. We come then to sub-element "a. an elongated plate portion." If we stopped there, that portion likewise would be present in Graham 811, Jeoffroy SC-580? A. That is a fair description for all of them, elongated plate portion.

Q. Fine. Then the sub-part (1), "provided with an upper face corresponding with and normally in contact with said underface of the fixed member," and there you said that is not literally present this morning, didn't you? A. That is right.

Q. Is that present in any other sense whatsoever in the Deere structure, Mr. Fenton? A. Well, it is an elongated plate portion, and the only thing that is not present is that

the upper face is in contact with the underface of the fixed member.

Q. In the Deere structure we have an elongated plate member? [311] A. That is right.

Q. Or shank attaching member, certainly nobody would question that? A. No.

Q. And you say it does not have an upper face corresponding with or normally in contact with said underface of the fixed member? A. That is right.

Q. And that is absolutely true, of course. Now then, does the upper face of this Deere 650 hinge member contact the fixed member of the Deere clamp any place whatsoever? A. No.

Q. Does the upper face of the Deere 650 hinge member perform any function in the operation of the structure? A. Certainly.

Q. What? A. It provides the hinge, the pivot.

Q. The upper face provides the hinge? A. Oh, the upper face?

Q. Yes. A. Oh, the upper face merely provides the shape and the strength.

Q. It is nothing more than the fact that we have a member which has a bottom and a top, that is all there is to [312] it, isn't there? A. Yes.

Q. And the top face of that hinge member just doesn't perform any function in the Deere structure whatsoever, does it, the functional performance? A. That is right.

Q. All right, sir. In Graham 798, what function does the top surface or upper face of the hinge member perform? A. It contacts the underface of the fixed member to provide the stop.

Q. It is the surface which contacts the underface of the fixed member to position the shank in normal operating position, is it not? A. That is correct.

Q. And it is expressly so defined in this claim, is it not? A. Yes.

Q. Now then, do you think it fair to say, Mr. Fenton, that the hinge member, shank attaching member in Deere 650 performs that function? A. No, that is the reason I said it wasn't present.

Q. It doesn't, does it? All right. You have said that it wasn't present, but then you followed up and said it was functionally present. Well now, tell me where it is that you find the function of the upper face of the 798 hinge member present in the upper face of the Deere [313] hinge member? A. In Item (2) here, we forget about the upper face, see, we don't mention the upper face. The shank attaching member functions by means of this bolt which attaches it to the shank, and then contacts the fixed member, you see.

Q. Well, that is not true, though, is it? A. Yes, it is true.

Q. Point it out, please. A. You asked how this functions.

Q. No, I didn't ask you that. A. You asked me—

Q. No, I didn't.

Mr. Fishburn: Let's see what you asked him.

Mr. Morris: I will have the reporter read my question back, please.

(Question read as follows:

"It doesn't, does it? All right. You have said that it wasn't present, but then you followed up and said it was functionally present. Well now, tell me where it is that you find the function of the upper face of the 798 hinge member present in the upper face of the Deere hinge member?")

Q. (By Mr. Morris) Do you have the question in mind? A. The question is how does the upper face function.

[314] Mr. Morris: No, would you—well, let me just reask it and save time.

A. Yes, sir.

Q. You have stated here that in the language of the claim the upper face of the hinge member in Graham 798 performs a definite function, that is, the function of contacting the underface of the fixed member to position the shank in operating position. Now, that is accurate, isn't it? A. Yes.

Q. All right. Now then, please tell me where there is an upper face of the shank attaching member in Deere

which performs that function. A. I told you that it did not perform it in this Item 1, not present.

Q. All right. So that neither the structure nor the function provided for that portion of the element is present in Deere 650, is it? A. Function of the plate, the shank attaching member, or the upper face?

Q. The upper face. A. Yes, not present.

Q. All right. You may return to the stand.

Now then, I take it that you want to say that if we don't confine that function to merely the upper [315] face of the hinge member and merely let it be broad enough to say that the hinge member forms that function, then you can find it present in Deere 650? A. It performs that function by means of its attachment to the shank. It is readily apparent, has been discussed here all during the two days.

Q. Is this what you are saying, Mr. Fenton? That because the shank is attached to the hinge member, the hinge member therefore performs the function of positioning the shank in its normal operating position? A. Yes, because it is the hinge member and is pivoted, and that controls through the pivot, it controls the angle, you see.

Q. Suppose you had a hinge member and no stop surfaces, what would stop it, what would position it? A. It wouldn't stop.

Q. Then is the fact that the hinge member is attached to the shank, does that fact have anything to do with where the shank comes to rest in home base position? A. Certainly it does, because of that nub which contacts the shank.

Q. Now, what nub are you talking about? A. Here is the stop (indicating).

Q. You are talking about the depending lug— A. That extends downward from the fixed member.

Q. The forward end of the Deere 650 structure? A. That is the wrong direction.

Q. I beg your pardon. Forward end of the Deere 650? A. Yes, that is the stop (indicating).

Q. Now, where does that in any way contact the hinge member or have any association with the hinge member

to perform this stop function? A. Well, it contacts the shank, but the hinge member, the pivot here, is part of that movement. You can't disassociate the hinge member from the shank when you are talking about the stop, because here is the other pivot point, see, so the two work together as a stop.

Q. Do you think, Mr. Fenton, that that is a fair interpretation of the specification of this element as it is set out here in Element 2 of Claim 1? A. It is a fair one on Element 2, on sub-heading (2), not (1), of course, as we have said. That isn't present.

Q. Well, in conclusion then, your view about Element 2 is that part of it is present and part of it is not present, is that it? A. That is right.

Q. Turn your attention to Element 3, "means connecting the elongated plate portion with the shank for maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion of the [317] shank attaching member." Now, I believe you stated in direct examination that in the Deere 650 structure, that it is a forward fastening bolt which is colored in gray? A. That is right.

Q. Mr. Fenton, in the Graham 798 structure you have, of course, colored the fastening bolt at the forward end in gray? A. Yes.

Q. And I note that you have colored the depending loop or stirrup element of the hinge member in red. I wonder if that depending loop element at the rear has anything to do with the connecting of the shank to the hinge member for maintaining the constant continuous contact? A. Well, not directly. It is colored red because it is a part of the shank, of the shank fastening part. The shank doesn't fit very tightly in there, and therefore it wouldn't furnish a horizontal attachment. It might resist some movement.

Q. Mr. Fenton, if you eliminated the stirrup or loop element from the rear part of the hinge member in 798, and left in the device only the fastening bolt at the forward end, would you have an operative structure? A. Yes, I think you would.

Q. You would? [318] A. I don't think it would operate quite as well, but it would operate.

Q. Do you recall your testimony int the Jeoffroy case, in which you stated that the Jeoffroy HT-5 structure would not be operative without the stirrup or loop on the pivoted part? Do you recall your testimony to that effect? A. No.

Q. I will refer to the printed record in Case No. 15117 in the Fifth Circuit, at page 80 of that record, and first, to orient that testimony, Mr. Fenton, I have before me here and demonstrate to you a hinge member of the type that was involved in that lawsuit. This is a Joeffroy hinge member. This particular one is identified as HT-5A, and has the set screw in it, but I will remove the set screw so that it will be substantially identical with the hinge member which was involved in that case. Would you agree with that? A. Would I agree that when you take out the set screw it is about the same? Is that what you are asking?

Q. Yes. A. Yes.

Q. It is the Joeffroy type hinge member which was under consideration in that case and about which you were testifying, isn't it? [319] A. Yes. I believe, however, that the testimony was offered in the controversy regarding the tightness of set screws.

* * *

The Court: We will recess until 10 a.m. tomorrow morning.

(Adjournment.)

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[320] MORNING SESSION, FRIDAY, MAY 4, 1962

F. C. FENTON resumed the stand and testified further as follows:

Cross-Examination (Continued) by Mr. Morris.

Q. Mr. Fenton, at the close of yesterday's testimony we were considering Element 3 of Claim 1 of the 798 patent

as applied to the Deere 650 structure, having on the easel Plaintiffs' Exhibit L, which is the claim chart and colored drawings of the patent structure, and the Deere structure. I believe I had just asked you whether or not the structure of 798, or as disclosed in the drawings of 798, would be an operative structure without the stirrup or loop portion at the rear of the pivoted member, the part that embraced the shank, and I believe you had stated that it would, that it might not be quite as good but that it would be an operative structure. Am I recalling it correctly? A. Yes.

Q. Now then, I had just asked you if in the Jeoffroy second case, in which this patent was first in issue, if you had not stated that a structure of this kind would not be operative if the loop or stirrup element were not present, and I believe you stated that you did [321] not recall any such testimony as that? A. Yes. But that was quite a few years ago, and I reviewed the testimony, and I did make that statement.

Q. All right. You did make that statement, and you are now satisfied that that is a true statement, are you not? A. The one in the former case.

Mr. Fishburn: Which statement are you referring to?

Q. (By Mr. Morris) The statement you made in the former case. A. Yes.

Q. So that without the loop or stirrup element this would be an inoperative structure? A. I said yesterday that it would operate under certain limited conditions.

Q. But it would not operate for the purposes for which it is intended, that is— A. Not fully, to—

Q. —to trip or rock and return to operating condition in rock country? A. Not in rock country. I think without that stirrup it would operate in cultivating soil, where the severe shocks are not—that is what I had in mind yesterday.

Q. Where the severe shocks are not present or where the [322] magnitude of the rocking motion is not so great? A. Yes.

Q. All right, sir. Now then, let's turn our attention to means, Element 3, "means connecting the elongated plate portion with the shank for maintaining the upper face of

the shank in constant continuous contact with the underface of said plate portion of the shank attaching member," and I think we now can conclude, can we not, that the bolt at the forward end by itself is not a means sufficient to perform that function in this structure? A. Well, it is not the only means in this structure. Both elements are present.

Q. All right. So that this mechanical element, Claim 3, as applied to the Graham 798 structure, includes then not only the fastening bolt at the forward end but also the stirrup or loop at the rear? A. That is right.

Q. And it takes the cooperation of both of those elements in order to perform the function called for in this structural element 3? A. There is a distinction there in that the stirrup at the rear acts in the rebound largely and it actually doesn't hold the shank in constant continuous contact with the face of the hinged member. It cooperates but [323] it doesn't—if there is some clearance there it may have a little play.

Q. There could be some slight clearance in there, that is true enough, but that element is necessary and does cooperate with the fastening means at the front end to hold the shank in the device, in the 798 structure? A. That is right.

Q. For example, let's show here what would happen. I will again use for demonstration Plaintiffs' Exhibit D-1, which is the Jeoffroy hinge member from their HT-5 type structure that was involved in the second Jeoffroy case, and I will remove the set screw from it so that we won't have any contention about the effect of that set screw. Now then, if we didn't have this loop or stirrup element at the rear—I will hold this in position as if it were in the plow—and this shank has encountered a big rock and has tripped back in that direction and is up, then when it turns loose it drives that shank forward and downward and in the upper shaft portion of the shank or forwardly extending portion of the shank that comes in to the device, it will drive that device downward somewhat, too, will it not? A. Yes.

Q. And if there is nothing to support the shank at the [324] rear end, quite shortly or just a few times in all

probability this fastening bolt at the front end will be snapped off or sheared off? A. It might be.

Q. Or else the hinge member itself will be twisted in two or something of that sort, wouldn't it? A. Might be.

Q. Now, let's consider again our language of the element, the structural element. This says means as applied in Claim 1, Element 3, says means, and it is a means to perform a function, isn't it? A. Yes.

Q. All right. Now then, are we agreed then, Mr. Fenton, that the means to perform the function as specified in that element in the 798 structure is the bolt plus the stirrup or loop at the rear? A. Except that the stirrup at the rear does not maintain the upper face in constant continuous contact.

Q. It by itself certainly does not, does it? A. No.

Q. And neither does the bolt by itself, does it? A. Well, the bolt does at the front end.

Q. At the front end? A. Yes.

Q. But throughout its length it does not, does it? [325] A. That is right.

Q. So that it takes the cooperation of the two to perform the function of maintaining the constant continuous contact of the upper face of the shank with the underface of the hinge member, is that correct? A. That is right.

Q. All right. Now then, will you transfer your thoughts, please, to the Deere 650 structure as shown in the drawing on the right-hand side? I believe in your direct testimony yesterday you stated that structural Element 3, Claim 1, is the fastening bolt at the forward end? A. That is right.

Q. Now, the same thing is exactly true in the Deere 650 as would be true in the 798 type structure, that the forward fastening bolt alone will not perform the function. Is that true? A. Well, as I said, it will hold the front end in contact but not along the entire face of the pivoted member.

Q. And if the only means we had in the device to perform the function were the fastening bolt it likewise would be an inoperative structure, would it not? A. Except in light work.

Q. It would not be an operative structure for the purposes intended for this device, would it? [326] A. One of the purposes.

Q. All right. Now then, so the forward bolt in Deere 650, which you testified yesterday satisfied the Element 3, does not satisfy Element 3, does it? A. There is an additional support, is there not?

Q. There is, but did you say yesterday that there was any additional support in Deere 650 which was a part of element "b"? A. Well, perhaps not, but it is there.

Q. And the fact is there isn't any other part in the Deere structure which is a part of Element 3, is there? A. There is another part of the Deere structure which supports the rear of the shank.

Q. Yes, but not a part of the hinge member? A. Not a part of the hinge member.

Q. Nor attached to the hinge member? A. It is a part of the fixed member.

Q. Right. It is not a part of the hinge member, it doesn't cooperate with the hinge member to perform the function of supporting this shank, does it? A. No, but it supports the shank.

Q. It supports the shank directly at the rear by the fixed part itself, doesn't it? A. Yes.

Q. Then in order to find a response for the mechanical [327] structure of Element 3 in Deere 650, you must bring into play the forward fastening bolt colored in gray, plus the rear supporting portion of the fixed member which extends down underneath the shank at the rear? A. That is right.

Q. Do you think, Mr. Fenton, that the rear supporting web of the Deere 650 clamp is a part of the structural Element 3, as defined in Claim 1? A. No, it is not mentioned in the claim.

Q. All right. So that brings us to the necessary conclusion that the structural element as defined in Element 3 of the patent is not present in Deere 650, is it? A. No, but I think the equivalent is there in the part of the fixed member which supports—

Q. You have testified at some length about equivalents and I am just going to let you go ahead, even though it does involve a problem of what you mean by equivalents. Please tell the Court how the rear supporting web of the Deere 650 clamp is structurally equivalent of the means specified in Element 3 of the Graham Claim 1? A. In Graham the shank at the rear supports—I mean the stirrup at the rear supports the shank, not tightly but loosely, and acts to prevent the shock effects from damaging the shank and its attaching member.

[328] Now, in the Deere 650 we have a similar piece of metal which extends across beneath the shank and supports the shank loosely, serves to support the shank from falling downward and serves to retain it during the shock action, therefore, it is somewhat equivalent, structurally at least.

Q. Do you understand the term, mechanical equivalent, Mr. Fenton, as applied to a structural element as meaning substantially the same means operating in substantially the same way to perform substantially the same function? A. That seems fair to me, yes, sir.

Q. Now, then, wherein is the supporting web construction at the rear of the Deere 650 clamp substantially the same means as a supporting stirrup or loop which is a part of the movable part? A. Both parts are situated directly under the pivot member, and both are rigid and support the shank in the same equivalent manner.

Q. Well now, what do you mean by the same equivalent manner? Let's examine that. The Jeoffroy structure supports the shank by means of cooperation with the hinge member, doesn't it? A. Yes, but it is just under the pivot in the same—

Q. That doesn't make any difference, but it supports it by cooperation with the hinge member, doesn't it? [329] A. That is right.

Q. The Deere means supports the shank by cooperation with the fixed member? A. That is right.

Q. It is a part of the fixed member? A. But it is in the same location.

Q. Really and truly, Mr. Fenton, all you are saying is that there is an element or a part which does perform the function of supporting the shank? A. That is right.

Q. That is situated at the rear of the clamp? That is it, isn't it? A. In the same position beneath the pivot point.

Q. And in that sense you are willing to say that it is an equivalent to a means which supports the shank from the hinge member? A. In function and operation.

Q. Now then, as the Graham 798 hinge pivots along with the shank—and I use here without numbering it for the record and without cluttering the record with further exhibit numbers an aluminum model of the Jeoffroy HT-5 structure so we can demonstrate with ease—first, the hinge member of the Jeoffroy HT-5 in all respects, even to form, is indistinguishable from the 798 hinge member, isn't it? [330] A. Yes, except—

Q. Except of course that the rod passes through in 798 while it goes to the side in Jeoffroy? A. Yes.

Q. Now then, as the hinge member of the 798 type pivots what happens to the supporting element or stirrup at the rear? A. It also pivots.

Q. It pivots right along with the hinge member? A. Yes, sir.

Q. In the Deere 650 structure, when the hinge member pivots along with the shank, what happens to the supporting element at the rear of the fixed part of the clamp? A. It doesn't move.

Q. Stays right where it is, doesn't it? A. Yes.

Q. So it doesn't cooperate with the hinge member to support the shank, does it? A. No, but it supports the shank, it does support the shank at that point.

Q. Yes, but it doesn't cooperate with the hinge member to support the shank at that point, does it? A. No.

Q. Nor does it move with the hinge member? [331] A. That is right.

Q. Then can you say really and truly, Mr. Fenton, that the supporting portion of the fixed member in Deere performs the function in substantially the same way, that is, the function of supporting the shank, in substantially the

same way as does the supporting element of the hinge in 798? A. Yes, I think it does, substantially the same way. The tilting action of that stirrup doesn't appeal to me as being significant.

* * *

[333] Q. (By Mr. Morris) It is your view that any structural element of a spring clamp for attachment of the shank to the frame of the plow, which supports the shank at the rear, regardless of what other element of the clamp it cooperates with or regardless of what part of the main part of the claim it is associated with, would satisfy the structural call of Element 3 of Claim 1? A. Obviously I couldn't say until I saw the element that you are talking about, perhaps you have in mind. Certainly I wouldn't say that any arrangement would satisfy it, no. But I have testified that I think this device does satisfy it, and that is my opinion.

Q. That is as far as you would want to go with it? A. Yes, I think so.

Q. I wonder if you have since yesterday or during the court trial, if you have examined the Cockshutt clamp which was held not to infringe the patent, to consider the means which it has for supporting the shank at the rear? A. No, I haven't examined it.

Q. From looking at it here can you tell right easily what means there is at the rear for supporting shank? A. That is the rear you have there, is it?

[334] Q. Yes, sir. A. Well, it is a U-shaped bolt.

Q. It is a U-shaped bolt which goes through the rear part of the fixed member and passes down underneath the shank to support it? A. Right.

Q. Is that in your opinion distinguishably different as a mechanical element from the rear supporting—A. Where is the fixed member—I mean the pivot in that clamp?

Q. Shall I take it apart for you? A. No, I thought we could see it from here.

Q. You can. A. This is the pivot (indicating).

Q. Pivot at the rear just like the others? A. Yes.

Q. Pivot pin is through the hole? A. This pivot is slightly ahead of this supporting member, which would make a little difference, but I would say that is substantially the same as the Deere.

Q. The supporting means at the rear of the Cockshutt clamp then, which constitutes the short U-bolt passing through the rear portion of the fixed member, is in your opinion substantially the same supporting means as the web portion, supporting web portion of the [335] fixed member of the Deere clamp at the rear? A. Yes. It serves the same purpose.

Q. You consider then Element 4, the transverse pin—now again the transverse pin here in Element 4 as a structural element is described in terms of the function which it performs and the position in which it is situated, is it not? A. Yes.

Q. You have pointed it out for us in 798 as the member colored in brown and also in Deere 650 as the member colored in brown? A. That is right.

Q. Do you feel that this language, "connecting the shank attaching member to the fixed member at the rear ends of said normally contacting faces," is of any significance or has any place as a part of the structural element? A. Why, certainly it is a part of the structural element.

Q. Would just any pivot pin upon which the shank and shank attaching member pivot satisfy the structural call of that element? A. Any pin?

Q. Just any pivot pin. A. No. The location is specific here, relatively specific.

Q. Relative and it is specific relative to what? [336] A. At the rear ends of the normally contacting faces of those two members.

Q. It is specified in terms of its position in relation to the contacting faces? A. That is right.

Q. And those two contacting faces would be the longitudinally extending faces of the fixed member and the corresponding upper face of the hinged member which are normally contacting each other, is that true? A. Yes.

Q. And of course as applied to the 798 disclosure, that is precisely accurate, isn't it? A. Yes, it is near the rear end of the contacting faces.

Q. Is it at the rear of any contacting faces in Deere 650? A. Yes. It is at the rear.

Q. At the rear ends? A. Not at the ends, but it is at the rear.

Q. Well, does rear ends mean anything to you in that structural element? A. Well, there is a slight difference there. You have an extension in your hinge member there in the Deere structure.

Q. We have an extension? A. Extension of the pivoted member.

Q. Well, the pin is not at the rear end of the— [337] A. Not quite yet.

Q. —of the hinge member. Of course that doesn't have anything to do with the problem of contacting faces though as described in this element, does it? A. It is near the rear end.

Q. Is it at the rear end of any contacting faces? A. It is at the rear end of the pivoted member.

Q. It is at the rear of the pivoted member, but is it at the rear of any contacting faces? A. Well, it can't be at the face. It is on a large portion of the—must have strength to the parts, so you can't put it right at the rear point, of course.

Q. I believe you have already testified up here under Element 2 that there isn't any contacting face of the hinge member at all in Deere 650, is there? A. Certainly; the contact face is between the shank and the hinge member.

Q. Well, is that the face that Element 4 is describing? A. Certainly.

Q. Read it again, please. A. Aloud?

Q. No, you needn't read it aloud. Just get it in your mind. A. I assume this to mean the contacting face between the hinge member and the shank.

Q. All right. Let's consider it then for a moment— [338] A. That is the only contacting face in this Deere structure.

Q. Let's consider the element then a little further. "a transverse pin pivotally connecting the shank attaching member to the fixed member at the rear ends of said normally contacting faces," and up here in Element 2 we first have an upper face—up in Element 1 of course we have a longitudinally extending underface of the fixed member, do we not? A. Yes.

Q. And in Element 2 we have an upper face of the plate portion corresponding with and normally in contact with said underface of the fixed member? A. Yes.

Q. Well, don't you think that in Element 4 down here the contacting face is referred to when it says, "said normally contacting faces" are the faces described in Element 1 and Element 2? A. No.

Q. You don't? A. No. I think under Element 2, subhead No. (2)—

Q. You think the contacting face referred to then, the normally contacting face referred to is only the contact of the shank face with the underface of the hinge member? A. Yes. As referred to in Element 2 there.

[339] Q. And it has no relation to a corresponding contacting underface of the fixed member? A. No.

Q. Mr. Fenton, I would like for you to take here before you a copy of the file history in this case.

* * *

Q. (By Mr. Morris) I would like for you to turn, if you will, please, to page 34. I don't believe the sheets there have any lines on them or line numbers on them. I can pick out the line for you, let me point it out, the middle of the second paragraph, the sentence beginning, "the contacting faces." Would you read that, please. A. "The contacting faces of applicant's device extend substantially the full length of the mounting and no one portion of one face contacts the other face before other portions come in contact."

Q. All right. Then pass on to pages 35 and 36, "Claim 13." Do you find that? The paragraph starts off, "Claim 13." A. Page 35?

Q. Yes. I beg your pardon, it is on page 36. [340] A. Yes.

Q. Would you read that paragraph, please. A. "Claim 13 distinguishes from the references by defining fixed member having a longitudinally extending underface terminating forwardly of the transverse member to which the mounting is adapted to be fixed and a shank attaching member having an elongated plate portion provided with an upper face corresponding with and normally in contact with said underface of the fixed member and provided with a longitudinally extending underface in engagement with the corresponding upper face of the shank."

Q. All right. Is there anything—when that discussion of these longitudinally extending faces and contacting faces was brought into that argument there in the file wrapper, is there anything that distinguishes one contacting face from another or permits you to say that this language of the claim applies merely to the contacting faces of the shank and hinge member and has no relation to the contacting faces of the fixed member and the hinged member? A. That is a rather involved question. You say is there anything in here that says that?

Q. Well, is there anything in there that indicates to you that there is some reason for selecting one of these [341] faces rather than the other faces as being the faces referred to in the claim? A. I told you, when you interrupted me, that Item 2 under there specifies that these are the faces between the shank and the attaching member.

Q. How is it that you conclude that it refers only to the contacting face between the shank and the hinge member and not the contacting face of the hinge member with the fixed member? A. Because the fixed member is taken care of in the claim above, and this is a new—I take it that this refers to the last mentioned face, which is in Item 2 under there.

Q. So summarizing, you are satisfied that the structural element as called for there has a response in 650 because the transverse pin is at the rear of the hinge member? A. Yes.

Q. Then in Element 5, the coil spring, I suppose there would be no doubt about the coil spring in both devices being seated upon the forward part of the fixed member? A. No.

Q. That is plain enough, isn't it? A. They are similar.

Q. Then Element 6, "means having connection with the [342] forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member to maintain the normal plowing depth of the ground working tool."

Now, as applied to the 798 structure, that mechanical element of course is literally responded to, isn't it? A. Yes.

Q. Now, this element is another one that is described in terms of the function which is performed by the means, isn't it? A. Yes, that describes the working of the device.

Q. Now you picked out of course the spring rod here and have colored it purple or lavender, as being the element. Of course the claim doesn't say anything about a rod. The reason that responds is because it is an element which does perform those functions prescribed for that mechanical element. Is that true? A. That is right.

Q. All right. Now then, to apply that mechanical element as so defined in terms of its function, do you think that would be necessary to find an element in an accused structure or some other structure which performs [343] the functions as prescribed for that mechanical element? A. Yes, I certainly think so.

Q. As a matter of fact, that is the only way that you can recognize the element, isn't it? A. Perhaps.

Q. Then when we look at the Deere 650 structure, the spring rods acting in response to the spring pressure, do we find that they perform the function of yieldably maintaining normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member? A. No, they do not.

Q. They do not? A. No.

Q. So we do not have a response for the functional call of that element, do we? A. The contact is on the spring —on the shank and not on the fixed member.

Q. The function of permitting the shank to rock and return to position is performed in Deere 650 certainly, nobody would question that? A. No.

Q. But the function as specified or the mechanical equivalent in Element 6 is not performed, is it? [344] A. Yes.

Q. So I think we must conclude that yesterday's testimony that element 6 of Claim 1 is not present—to the effect that it was present in 650 is incorrect, and that the element is not present in Deere 650? Isn't that where we are? A. Well, the same point is argued up in Claim 1, that you have substituted the end of the shank for the end of the hinge member. The contact is there, and because the two are bolted together there they act as a unit at that point, you see. Now, if it is equivalent up above it is also equivalent here functionally.

Q. You are willing to say then that this structural element finds a response in 650 because the function of positioning the shank is performed? A. Yes, sir.

Q. That is the fact about it, isn't it? A. That is right. The exact mechanical equivalent is not there.

Q. The mechanical equivalent is not there, is it? A. No.

Q. All right, sir. Let me go just one point more on that element. Then I think we are ready to conclude as to Element 6 of Claim 1, that it is not literally present [345] in Deere 650 nor is its mechanical equivalent present. There is a structure which performs the same function? A. Yes.

Q. I would like to back up just a moment and give a bit more consideration to structural element 1 and particularly sub-part "a" of Claim 1. We are referring here to the fixed member having "a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed." Now, you have testified, of course, before that the depending lug at the forward end of the Deere 650 is sufficiently—may be sufficiently called a longitudinally extending underface to satisfy the final response to that structural element of the claim, have you not? A. Yes.

Q. Now I would like to again refer you to the file wrapper history, Mr. Fenton. In the very same reference I called your attention to a moment ago, on page 34, which is the remarks being made, "the contacting faces." Now

read that again, if you will, please. A. "The contacting faces of applicant's device extend substantially the full length of the mounting and no one portion of one face contacts the other face before [346] other portions come in contact."

Q. Does that language as set out there in the file history give some substance to the proposition here that the longitudinally extending face that is called for in the claim is a face which extends substantially the length of the clamp structure? A. This statement in the file wrapper is not in the claims. There is nothing in the claims that says the face must extend the full length.

Q. No, but that is what the applicant says is the meaning of this language, isn't it? A. No, this is a discussion—as I understand your portion here, this is discussion between the attorney and the Patent Office.

Q. Those are the remarks made by the applicant's attorney? A. That is right, yes.

Q. To the examiner? A. Yes, sir, but it doesn't appear in the patent.

Q. Well, would you think that the term "longitudinally extending underface" fits into the language of the remark which we just read, "contacting faces extend substantially the full length of the mounting"? A. No, not in this Deere case, of course. But now you are reading in something that doesn't appear in the patent. I don't know what—it is a legal point perhaps, [347] but I don't know what importance this discussion has between the attorney and—

Q. What do you think this following portion of the language means when it says, "extend substantially the full length of the mounting and no one portion of one face contacts the other face before other portions come into contact"? A. What do I think of that?

Q. Was that projecting the idea that these corresponding contacting faces, the underface of the fixed member and the upper face of the hinged member would come together along their full length at the same time? A. Well, they certainly do in the Graham patent, in the Graham device, certainly come together over substantially their full length.

Q. And that I assume in no way changes your view that a mere point contact at the forward end, or a mere lug at the forward end is the face called for? A. No, it doesn't change it.

Q. All right. Claim 2 of the 798 patent is of course not in issue as applied to the 650 structure. I suppose you are familiar, though, with Claim 2? A. Yes, sir.

* * *

[348] Q. (By Mr. Morris) Let's turn our attention then to the Deere 100, Mr. Fenton. A. Claim 1?

Q. Claim 1. I have replaced on the easel here Plaintiffs' Exhibit M, which is the colored claim chart, the Deere 100 clamp on the right, the drawing on the right. Again, right at the outset, of course the introductory part, "In a plow having a frame," in this instance a transverse frame. You have colored the transverse beam element in blue. In the 798 structure it is an I-beam type device, in the Deere 100 it is a square tubular beam. Is that correct? A. That is correct.

Q. And the shank in the introductory portion of course is called for and is colored green on the chart? A. Quite right.

Q. Then we come to the general introductory language as to a mounting for pivotally attaching the tool, and we come to Element 1, the mounting including "a fixed member adapted to be fixed to the transverse member [349] of the frame and having

"a. a longitudinally extending underface terminating forwardly of the transverse member to which said mounting is adapted to be fixed."

Now, yesterday I believe you stated that there was no such element in the Deere 100 structure, in the clamp itself?

A. No, in the part that is colored yellow there, which is the clamping member, there is no longitudinally extending underface.

Q. The clamping part in yellow does not have a longitudinally extending underface? A. That is right.

Q. And it is only by the contention that since the clamp is attached to the frame the frame essentially becomes a part of the clamp and therefore the underface of the frame member will satisfy the structural element of a longitudinally extending underface of the fixed member? A. That was my testimony, yes, sir.

Q. Then the frame of the plow ceases to be a separate element, it ceases to be a plow frame, it becomes a clamp? Is that true? A. In a sense, yes.

Q. Or if you want to put it the other way around, the clamp ceases to be a clamp, it becomes the frame of the [350] plow? A. No.

Q. Becomes a part of the frame? A. No. No, I don't think your second statement is justified.

Q. Doesn't work both ways? A. No.

Q. All right. Don't you think as an engineer, Mr. Fenton, that when we are talking about the mechanical element as specified there that we are talking about something besides the beam of the plow or the patentee is talking about somethng besides the beam of the plow? A. Well, the beam is mentioned in the patent.

Q. Oh, yes, and it describes it up at the start as a plow having a beam, transverse frame? A. Yes, to which the fixed member is adapted to be fastened.

Q. Now, aside from patents, if you as an engineer took a set of specifications and set out to build a plow tool and at the outset it provided for a frame member and then it provided for a clamping member to clamp some other part to the frame, would it be your thought that the specifier, whoever made the specifications, was talking about the same thing when he said frame in the first part and clamp in the second part? [351] A. Well, I don't get any point out of your question.

Q. Well, would you try to answer it, please, sir? A. It would all depend on the circumstances, the device which you are talking about. I don't think the question is—

Q. I don't suppose engineers are any different from the rest of us. We use the English language and we have words that mean things in the English language, don't we? A. We hope so.

Q. And do you think that a fixed part of a clamp, by any kind of a definition at all, can be transferred over to become a frame of a plow? A. It does become a fixed member when it is clamped to the frame. You see—I explained that all yesterday, I think. My assumption is this, that this device has no stop for the spring action, which other folks have testified here as being absolutely necessary, and since it doesn't have a stop other than the underface of the beam, the plow beam, we are justified in assuming, as far as the functioning is concerned, that this is part of the fixed member.

Q. All right. A. That is the basis on which I gave my testimony.

Q. Let's look at it then just a bit farther, Mr. Fenton. [352] You are willing to say that the function performed by the underface of the fixed member in 798 is performed in Deere 650 and therefore, since the function is performed, the element, the structural element is sufficiently satisfied? A. Yes.

Q. All right. But again, just as you said in Element 6 of Claim 1 as applied to the 650, you would agree with me, would you not, that the mechanical equivalent of the structural element as called for in Claim 1, sub-part "a", or Claim 1, Element 1, sub-part "a", is not present in Deere 100?

Mr. Fishburn: If Your Honor please, I think the witness is referring to the fact features—

Mr. Morris: I don't want what your understanding of the witness is, Mr. Fishburn, I am entitled to cross-examine this witness and I object to your suggesting what the witness means or what his answer is.

Mr. Fishburn: I want to make the statement that when you were interrogating this witness about the mechanical equivalent you were referring to this hinge member—

The Court: What is your objection, Mr. Fishburn? [353] Mr. Fishburn: My objection is to his questioning this witness about the mechanical equivalent in this patent, in the first place, that is the function of the Court. When he asked this witness if this mechanical equivalent was here in Element 6, the witness said yes, but he was im-

mediately interrogated before about the hinge member not going out to the end of the shank. My point is that that is the question for the Court to determine, whether or not they are mechanical equivalents, and not this witness.

Mr. Morris: I didn't open up the inquiry about mechanical equivalent.

The Court: The plaintiffs did open up the inquiry about mechanical equivalent. I think it is proper cross-examination.

Q. (By Mr. Morris) Now, Mr. Fenton, my question is this. You are satisfied that the function performed by Element 1, sub-part "a", is present in Deere 650, but you will agree freely with me that the mechanical structural equivalent is not present, will you not, in 650? A. No, I wouldn't agree with you.

Q. You won't agree with that? A. No, because it is my contention that the square beam of the plow becomes basically a fixed member when [354] this is clamped to it.

Q. All right, let's come back to our primary steps of a, b, c. You understand the term mechanical equivalent as applied to a single element as meaning substantially the same means to perform substantially the same function in substantially the same way? A. Yes.

Q. All right.

* * *

[356] Q. (By Mr. Morris) Now then, coming back to our question, in the 798 structure, the mechanical element as defined in Element 1, sub-part "a". You have stated here that the longitudinally extending underface called for there is to perform the function of providing the stop or positioning of the shank? A. That is right.

Q. Now, to do that it is the body part of the clamp itself or fixed part of the clamp itself which does that positioning, isn't it? A. In Graham?

Q. In Graham. A. Yes.

Q. In Deere 100, the body portion or fixed portion of the clamp itself does not contact the shank attaching member to position the shank in any way whatsoever, does it? A. No.

Q. So that the fixed part of the Deere (650) clamp does not perform the function of providing the stop or positioning the shank in its home based position, does it? A. No.

Q. It is the beam of the plow which does that? A. To which the fixed part is clamped.

[357] Q. Is attached. All right. I beg your pardon, I did say 650. I don't mean the 650, we are talking about the 100. A. The 100, yes, sir.

Q. And whatever questions I may have phrased here in this last course of examination were not directed to 650, they are directed to Deere 100, which is the chart we have on the easel.

Now, you didn't misunderstand me, did you, Mr. Fenton? A. No, sir.

Q. And it wouldn't change your answers, by getting our focus back on 100? A. No.

Q. All right. Of course I don't think we need to dwell at length on Element 2. I will by-pass sub-part b. of Element 1. You have already explained your position about that, and I will not go into it any further. Element 2, "a shank attaching member having

"a. an elongated plate portion provided with

"(1) an upper face," and so on, you have explained your position on that, and your testimony is that the way you find a response for that structural element * * * in the [358] Deere 100 structure you find a section of the shank attaching member which contacts an underface of the beam? A. That is right.

Q. And that, as you have already explained, in your mind is the same thing and satisfies the structural call of the element as if it contacted the underface of the fixed member? A. Correct.

Q. In the 798 patent structure, Mr. Fenton, what element does the hinge member cooperate with in positioning the shank? A. Cooperates with the upper face—the lower face of the fixed member and the springs and bolts.

Q. And in Deere 100 the upper portion of the shank attaching member, to perform a positioning function, cooperates with the frame of the plow, doesn't it? A. Yes.

Q. Now, in Element 3, means for connecting the elongated plate portion of the pivoted member with the shank. Of course there is no question that that is present both in 798 and in Deere 100, is there? A. No, sir.

Q. That is quite evident. Here in Deere 100 we have the full means called for, don't we, that is, in this [359] instance a fastening bolt at the forward end in conjunction with a strap and two bolts at the rear, all of which elements cooperate with the hinge member to fasten the shank to the hinge member, don't they? A. Right, yes, sir.

Q. No contention about that. Element 4, "a transverse pin pivotally connecting the shank attaching member to the fixed member at the rear ends of said normally contacting faces." I assume here your testimony would be the same in applying the structural element to Deere 100 as it was in Deere 650, because of the fact that the pivot pin is located at the rear of the structure, it would be your thought that it responds to the structural language of being located at the rear end of said normally contacting faces? A. Yes, the pivot is entirely to the rear of those contacting faces. That is, it is past the middle, at least.

Q. It is somewhat to the rear of the middle? A. Yes.

Q. To the rear of the middle of the contacting face of the hinge member and of the upper face of the shank. Where is it in relation to any contacting face of the fixed member that you find? [360] A. Well, it is to the rear of our bottom of the beam, which in my contention is the fixed member.

Q. Consider the next element, Element 5. "A coil spring having one end seated on the forward end of the fixed member." Of course that is certainly present, isn't it, in Deere 100? A. Yes, I think so.

Q. No question about it. Pass to Element 6, "means having connection with the forward end of the shank and with the other end of the coil spring." Let's stop right there before we consider the rest of the language. I believe you said you find that present in Deere 100. Will you tell us how, please. A. Well, I think I didn't say that was present in the direct testimony. I said that contact

between the means is through the hinge member, which in turn is bolted to the shank, you see.

Q. All right. So the structural element as called for in the claim is not present in Deere, is it? A. No. I think you misquoted me as to my testimony yesterday.

Q. I didn't mean to misquote you, Mr. Fenton. That is the way I understood your testimony. So we are together on it then, now, that the structural element as defined in the claim is not present in Deere 100, is it? [361] A. Not exactly, no.

Q. As a matter of fact, in order to find any structural response to that structural element at all you have to bring into play additionally the fastening bolt colored in gray which you have already testified was the means specified in Element 3? Correct? A. And also serves this additional need.

Q. So that in order for you to find any kind of structural response at all to the first part of Element 6 you must bring into play not only the spring rod and its connection with the hinge member but in addition the fastening means which fastens the hinge member to the shank, is that true? A. That is right. And bolted together there, that gray bolt.

Q. Now let's consider the rest of the language of the element: "whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member to maintain the normal plowing depth of the ground working tool." Now since we have already agreed up in Element 1 that you do not have any such normally contacting faces of the hinged member and the fixed member, then you don't have any response to the functional language of Element 6 either, do you? [362] A. No, I don't agree with you there.

Q. You don't? A. No. I contend that we do have up there those contacting faces, and therefore this acts in the same way to maintain this normal working relation.

Q. And you do that entirely on a functional basis, do you not, Mr. Fenton? A. No, not entirely.

Q. Will you agree that the structure as defined in Element 6, or the function as defined in Element 6, that is,

"whereby the spring yieldably maintains said normal contact of the upper face of the plate portion of the shank attaching member with the underface of the fixed member" is not present? A. Yes.

Q. All right. So the structure— A. The fixed member includes the frame. We go back to that.

Q. It is only included if the frame is brought in as a part of the fixed member? A. Yes, sir, quite right.

Q. Otherwise the frame is not properly a part of the fixed member, then there is no structural response in Deere 100 for Element 6, is there? A. That is right.

Q. All right. Thank you. Let's turn our attention to [363] Claim 2, structural elements, as applied to Deere 100. Down through sub-part 2 of Element 2, the language is precisely the same as Claim 1, is it not? A. Yes, sir, I think so, exactly the same.

Q. Yes, sir, word for word. There is no need for us to further discuss that portion of it then, is there? A. I agree.

Q. All right. We come then to Element 2, Subpart b, "said shank attaching member having a lug extending upwardly between said ears of the fixed member and disposed at the rear end of the plate portion and above the plane of the underface of the fixed member."

Now as I understand your testimony, the lug of course you find as the upstanding portion at the rear of the Deere 100 hinge member? A. That is right.

Q. Of course as far as the lug language is concerned it is there, nobody challenged that. But then it is described, though, in terms of a position, "disposed at the rear end of the plate portion and above the plane of the underface of the fixed member."

Now then, as I understand your testimony, again, the way that you find a structural response to that element is by calling the under surface of the beam the underface of the fixed member, then the [364] pivot pin is located above that point? A. That is right.

Q. And you find the response? A. That is right.

Q. So that again if the beam is not properly considered a part of the fixed member, then there is no structural response for that element, is there? A. That is right.

* * *

(Noon recess.)

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[365] AFTERNOON SESSION, FRIDAY, MAY 4, 1962

F. C. FENTON resumed the stand and testified further as follows:

Cross-Examination (Continued) by Mr. Morris.

Q. I believe that will conclude our discussion, Mr. Fenton, of the sixth element of Claim 2 as applied to the Deere 100 structure. I would like to back up just a minute and consider one point in Element 1 of both Claims 1 and 2, and it is in the sub-part "a" again.

We have talked at some length about the longitudinally extending underface of the fixed member, but I don't believe we have specifically pointed out the language "terminating forwardly of the transverse member." Now in the 100 clamp, if the frame member is construed as a part of the fixed member in order to satisfy your structural requirement of a longitudinally extending underface, then what are you going to do with the additional call of that structural element that the underface terminate forwardly of the transverse member? A. Actually, it terminates at the edge of the fixed member, not forwardly.

Q. So that whatever function there is for the forward [366] termination wouldn't be present, would there? A. The forward end of it. I don't know whether that would satisfy it. The forward end of the beam.

Q. In any event, it doesn't truly respond to the language of the element, does it? A. Not completely.

Q. Now I would like to turn back to the broad consideration with which we commenced our discussion of structural elements, and I believe we agreed at the very outset of the cross-examination here that the structural

elements basically are a fixed member for attachment to the frame of a plow, a movable member, or shank attaching member, a pivot pin, which connects the shank attaching member to the fixed member, a fastening means for fastening the shank to the hinge member, or shank attaching member, a coil spring, and the rod means for transmitting the spring pressure to the other parts of the device. That is correct, isn't it? A. Did we include the frame too?

Q. Well, taking the frame, of course, of the plow and the shank of the ground working tool as coming into the structure. A. Yes.

Q. All right. Now then, whenever there is language in any element of the claim that goes beyond the broad statement [367] of the element, that would constitute some kind of a limitation or further defining of the element, would it not? A. Yes.

Q. All right. And would it be your view, Mr. Fenton, that in construing the elements, the structural elements as defined in the claims that the additional limiting or defining language which is employed in the particular element should be given some application? A. I think so, yes, sir.

Mr. Morris: Thank you, sir.

You may have the witness.

Re-Direct Examination by Mr. Gold.

Q. Mr. Fenton, in the cross-examination I believe you were asked about various mechanical elements. I have a spring here in my hand, I believe you said that was a mechanical element? A. Yes.

Q. As I hold it here, what is the utility of that spring? A. No utility except to give you weight perhaps to lift.

Q. But the spring itself as I hold it has no utility? A. No utility.

Q. What about the T-bolt that I have in my hand? That is a mechanical element, is it not? [368] A. Yes.

Q. Does it have any utility as I hold it? A. No, not as you are holding it there.

Q. I now have some pieces, pieces of iron, part of a shank, coil, nut, washer. What is the utility of those as I hold them? A. Just a collection of junk iron.

Q. They are all mechanical elements, are they not? A. Yes. They are old mechanical elements.

Q. Would you say the same thing about this clamp member that is a fixed member of the 811 patent? What is its utility as I hold it? A. Applied weight.

Q. Now I am showing you the Defendants' Exhibit 27-A. That is the Deere 100 series clamp, is it not? A. Yes, sir.

Q. As I hold it, what is its utility? A. In that position it has no utility except perhaps to show to the Court in this case.

Q. It has a series of mechanical elements though, doesn't it? A. It has, yes, sir.

Q. Now we go a little further. I have one here, Plaintiffs' Exhibit I, that is the 650 series Deere clamp. It has a shank and a chisel on it, does it not? [369] A. Yes, sir.

Q. Does this have any utility as I hold it here? A. Not as an operating machine, no.

Q. I couldn't very well plow with it? A. Not in this court, no, sir.

Q. As I was holding it there could I plow any place with it? A. No, sir.

Q. So when would one of those clamps become utilitarian, to plow? A. When it is mounted on the plow frame and equipped with power to pull it in a field.

Q. It would take some particular environment then to have utilitarian purposes? A. Sure.

Q. Now, let's refer to Claim 1 of the Graham patent and I read the first part of it. "In a plow having a frame and a ground working tool provided with a shank adapted to rock relatively to the frame when the plow is in operation in a forward direction."

Does that give you any idea as to the purpose of this equipment? A. Yes, that is a general statement regarding the purpose of it.

Q. Would it make any difference then whether I have a [370] pile of loose mechanical elements or whether I have some kind of assembly in a particular environment as to utilitarian purposes of the structure? A. Well, you

must have these elements fitting into a workable unit, of course.

Q. In your opinion is the frame and the shank a part of the workable unit? A. Yes, I think so.

Q. Now, you were asked about the objects in operation of the Graham 798 device and you were also asked if the patent mentioned pumping action. Have you read the patent since you were asked that question? A. Yes.

Q. Do you have a copy of the patent? A. Yes, sir.

Q. Will you turn to copy of the patent, Plaintiffs' Exhibit A, fourth column.

That is on page 2, Your Honor, of the specification.

Tell us whether you find anything in the specification about pumping action? A. Yes, there is a paragraph there.

Q. Will you read it, please. First tell us where you find it.

The Court: On page 2?

[371] A. Last paragraph, beginning with line 67.

Mr. Gold: It is the last paragraph on column 4, Your Honor.

A. "During operation of the plow, there is also a vibratory or pumping movement of the ground working tool that acts to reduce the draft and facilitate operation of the ground working tool in plowing up and heaving the soil to form the ridges and furrows. The pumping action of the ground working tools work the fine soil downwardly to form the seed bed and the larger clods, straw and other mulching materials are worked into the surface for covering the fine soil and serving as a mulch to preserve the moisture."

I might add it is also mentioned in the original third paragraph stating the purpose when it says, "when the plow is working in rocky and/or heavy soil." It broadens this a little there in that respect.

Q. (By Mr. Gold) Then can you tell us now whether or not pumping action is mentioned in the Graham 798 patent? A. Yes, it is mentioned.

Q. I think there were also some questions about what was known by the normal positioning language in the

claims. Go to the top of column 4. Well, in order to have proper continuity let's go to column 3, starting with [372] line 63, and read that paragraph. A. "This is effected by a resilient connection as now described."

Q. I am sorry, I said line 63, column 3. A. "The plow shank and movable part 12 of the mounting are resiliently retained in normal position with the upper face 59 of the plate portion 51 in clamping engagement with the underface 60 of the fixed part 11. This is effected by a resilient connection as now to be described. The end portion 8 of the shank and plate portion 51 of the movable part have elongated openings 61 and 62 that register with the slat-like opening 20 of the fixed part, as shown in Fig. 2. Extending through the registering openings 60, 61 and 20 is a rod 63 having a transverse head 64 on its lower end and engaging under the end portion 8 of the plow shank. Sleeved over the rod and having one end engaging the spring seat 22 is a coil spring 65 having its upper end connected with the upper end of the rod by washer-like spring seat 66 retained on the upper end of the rod by a nut 67, the nut being tightened on the rod to compress the spring 65 sufficiently to retain the shank 2 and movable part 12 in normal position but to allow rocking movement of the movable part when the shank is rocked. This rocking movement of the shank [373] will cause the movable part 12 to pivot away from the fixed part 11 along with the forward end portion 8 of the shank 2 to effect compression of the spring 65 so that the stored up action in the spring will return the shank and movable part of the clamp to normal position with the plate portion 51 resiliently clamped against the fixed part 11 of the mounting as shown in Fig. 2."

Q. Does that tell us anything relative to what is meant by normal position in the claims? A. Yes, that seems quite definite. That has been gone over several times already here.

Q. I think you were already asked about the word stop. Does that paragraph suggest anything about stops? A. Yes.

Q. In what way? A. That the coil spring retains the movable part 12 in normal position so that the stored up

action of the spring will return the shank and the movable part of the clamp to its normal position.

Q. Now, when we think about the assembly that we have here, does the shank and the clamp have any cooperative relationship in operation? A. The shank and the clamp?

Q. Yes, sir. [374] A. Certainly they have cooperative relation.

Q. Would the action of one part have any effect on the action of another part? A. Surely.

Q. Would resiliency of the shank or the extent of resiliency of the shank have anything to do with the operation? A. Certainly will have an effect on the operation of the unit as a whole.

Q. Would it have any effect as to stressing of the parts? A. Yes, certainly.

Q. If we took the shank by itself, though, separately from the elements, would it have any effect then? Just took the shank by itself and held it up here, would it have any effect then on the rest of the parts of the clamp? A. Certainly not. If it is removed from the clamp, it will have no effect on that clamp.

Q. Would you say the association then of the parts is important? A. All-important. It is my opinion it is rather pointless to point out a lot of mechanical parts that are old elements in themselves, independent of their assembled relationship. It is meaningless.

Q. I believe in your testimony on cross-examination there [375] were some questions relative to the old 811 structure, and there was a plate member that I believe you said had been called a fulcrum plate, and you said it could be called a shank attaching member, is that right? A. I believe we called it that interchangeably more or less.

Q. You and Mr. Morris were agreed it could have that terminology? A. Not strictly a shank attaching member, but we called it that.

Q. This plate member has a groove that lays over a pin, doesn't it, to form a pivoting arrangement? A. That is right.

Q. Is that plate connected to the fixed member by that pivotal member? A. It is in engagement with the pivot pin and in a sense is connected, not rigidly, not completely connected.

Q. Does the pin pivotally connect the plate to the fixed member? A. Does the plate pivot—

Q. Does the pin— A. Yes, the pin operates to connect it.

Q. It has a sliding or a rotative motion on the pin, is that right? A. Yes, when it pivots.

[376] Q. I can easily remove it. No bolt or anything fastening it? A. No. I think it might be fair to say that when the shank is inserted that you can't remove it as you did there so easily, so essentially it is retained there on that pin.

Q. Now, I have placed the portion of the shank in the clamp. Where is that shank relative to that plate member? A. The shank is above the plate member.

Q. Now then, I can move that shank back and forth, can't I? A. Yes, sir.

Q. I can swing the plate member down a little bit and move the shank up and down on it, can I not? I can move the shank up and down (demonstrating)? A. Yes.

Q. Is there anything holding that shank in constant contact with the plate member? A. No, except the upper pressure of the spring. As you moved it there it is not held in contact.

Q. In the 811 patent was there anything about longitudinal movement of the shank? A. Yes, quite a little.

Q. What longitudinal movement is mentioned in the 811 [377] patent? A. The longitudinal movement of the shank, did you say?

Q. No, I asked you what longitudinal movement is mentioned relative to the 811 patent. A. I think it is mentioned several times in the patent, often, and it is the movement, longitudinal movement due to looseness of the connecting parts.

Q. Now, the plate member pivots about what axis in the operation of this 811 device? A. Pivots around the pin.

Q. The axis of this pin? A. Yes, and through those areas.

Q. Now I have it in operation wherein this would open up from hitting a rock and I start moving it back to its upper position, what axis would the shank be pivoting about? A. Well, it pivots around the lower face of the fixed member, the curved face.

Q. On the upward movement of the shank and plate? A. Yes. There is a double pivot in this shank, as has often been described.

Q. When it is plowing and there is a force up on the shank, where is the pivotal axis of the shank? A. In normal plowing?

Q. Yes, sir. [378] A. Then the shank would be held down against the plate and whatever pivot occurs would be in the pivot pin, unless there was extreme pumping action.

Q. What about the upper and rearward force on the shank in this plowing operation? A. If it does any pumping, then the shank will raise up to its other pivot point.

Q. And where is that other pivot? A. As we just said, under the curved member of the fixed part, the underside of the curbed member.

Q. You say the shank then pivots about two pivot points? A. Of the shank. The clamp has two pivot points, one for the fulcrum plate and one for the shank.

Q. I believe you were asked a number of specific questions relative to the operation of the 811 clamp. Can you tell us the differences in the operation of the 811 clamp and the 798 clamp, as shown here on the charts? A. You want the general operation or the specific operation?

Q. The differences in the operations. A. Well, overall, if you watch it, it appears to operate in a similar manner. But actually there is more movement between the shank and the hinge member, there is a chance for more longitudinal movement between those two, and there is a different pivot point for the shank, and walking behind this plow in operation [379] you are struck with the general tendency for the shank to move laterally in the operation; tendency to move laterally in the operation.

Q. Would it be possible for the shank in the 811 patent to pivot without longitudinal movement? A. In the attaching parts?

Q. Yes. A. No, because of the two separate pivots I think the longitudinal movement is essential in that, some longitudinal movement.

Q. Can you tell us the reason or can you point out the reason on this model? A. Well, this plate, that you call the fulcrum plate or shank attaching member, pivots around this pin, and of course that gives it a radius of movement. Now, the shank pivots around the point higher above, farther above, and a different radius, so there must be sliding action between them as they pivot.

Q. What keeps that shank from being pulled out of this clamp? A. The spring pin.

Q. That is all? A. Yes, that is all.

Q. What kind of hole was in the shank? A. It is an elongated hole, which gives possibility for [380] the shank to move laterally.

Q. Now, I believe that you were asked about the clamps and the results obtained in the ground working, and whether or not the different structures would achieve the same result, and you said something about generally speaking they did. What did you mean by "generally speaking"? A. I observed these different clamps in operation and as far as I can tell from observation they operate in an identical manner, if the springs are adjusted at the same tension, they move in almost an identical manner, generally speaking.

Q. Now, when you say they move in almost an identical manner, what about the operation of them, actual operation of the parts? A. Well, there is some difference, of course, in stresses and other things.

Q. Then your answer is not directed to the actual operation?

Mr. Morris: Your Honor, I believe this is his own witness and I object to the leading of the witness in an attempt to explain his answers.

The Court: Sustained.

Q. (By Mr. Gold) Now, in referring to Claim 1, if you look at the chart, Defendants' Exhibit M— A. In the 100 series?

[381] Q. Yes, 100. Referring to the fixed member, the part that you colored yellow, and the box part of it, and particularly the longitudinally extending underface of the fixed member, can you tell us anything about what is said relative to the extent, extent of the surface? A. In the claim language?

Q. Yes, sir. A. No, there is nothing said about the extent of the underface in this particular element.

Q. What about the upper face of the elongated plate portion of the shank attaching member? Is the extent given on that? A. That is in Element 2?

Q. Yes, sir. A. No, there is no mention of the length of the face.

Q. Is it your understanding that each element of the claim must differ from similar elements of some prior art structure?

Mr. Morris: Object to that, Your Honor, as a pure question of law.

The Court: I think so. Objection sustained.

Q. (By Mr. Gold) With reference to Element 3 of Claim 1, what is the function of the element that is specified in Claim 1? A. The function of this element is to connect "the [382] elongated plate portion with the shank for maintaining the upper face of the shank in constant continuous contact with the underface of said plate portion of the shank attaching member."

Q. I believe on the charts, Plaintiffs' Exhibit M, it shows the bolt in gray. What about the function of that bolt, relative to the wording of Element 3 of the claim? A. That is the attaching member that maintains the upper face in contact, the upper face of the shank with the shank attaching member.

Q. What about constant continuous contact? A. If nut is tight it would be constant and continuous.

Q. Well, now I have placed the chart, Plaintiffs' Exhibit L, on the easel. What about the bolt in the Deere 650

clamp and its function? A. It performs a similar function.

Q. What about constant continuous contact? A. I would say the two are very similar in their action, as far as that is concerned.

Q. And the Graham 798 structure keeps the shank from being pulled out of the clamp? A. There are two things that would keep the shank from being pulled out, this gray bolt and also the spring bolt.

[383] Q. When would the spring bolt have any function like that? A. It would only be in case the gray bolt ceased to function or became too loose or worn or something like that. However, there is more clearance in the hole through which the spring bolt places.

Q. And the Deere 650 series, what keeps the shank from being pulled out of the shank? A. This bolt in gray.

Q. Now, you were telling us something about a function for the loop on the hinge member of the Graham 798 patent. What is the function of that loop? A. It supports the shank when the plow is out of the ground, and also prevents some lateral movement of the shank in plowing, and it performs valuable service on the rebound after the shank passes an obstruction. I believe those are the three main objects or uses of that device.

Q. Is that loop essential in normal plowing operations? A. I stated that the plow would work in light work in the absence of rocks, and so forth, might work for quite a while, but I considered for a unit, as it is intended to be used, this is essential.

Q. Now, as far as the rebound of the shank that you mentioned as one of the functions of that loop, did you [384] find anything in the Deere 650 series in regard to rebound of the shank? A. Yes. The shank is supported by a portion of the fixed member which extends across below the shank. I testified this morning that it performs a similar function, as far as the rebound is concerned.

Q. What is your opinion regarding the mechanical equivalency of the loop on the Graham 798 and the bar portion in the Deere 650 series clamp? A. I believe that they are mechanically equivalent in the work that they do.

Q. I believe you stated a little bit ago that the gray bolt would function to maintain the continuous contact with the underface of the shank member with the underface of the hinge member. How much contact is required in that Element 3 of Claim 1? A. It doesn't state the length, but it says the upper face of the shank, and since the shank curves soon after leaving it, certainly it doesn't include the whole shank, so I would assume that any length of contact, constant and continuous contact, would satisfy the element of this claim.

Q. A sixteenth of an inch? A. Oh, well, any reasonable length. Three or four inches.

Q. You were asked a question about the Cockshutt clamp, [385] Defendants' Exhibit 1, and I believe the question was, did the pin pivotally connect this plate member to the fixed member. Now, would you examine it and see if that pin pivotally connects the plate member to the hinge member? A. Not in the same sense that it does in the 798, but in a sense it is similar to the 811. The plate bears against the pin on sort of a shoulder. It is even less permanently connected than in the 811 patent, because it simply has one bearing against the shoulder.

Q. Then the plate is actually loose, is that it, that part of the fixed member? A. Well, attached to the pin.

Q. Do you know how the shank is held in the Cockshutt device to keep it from being pulled out of the clamp? A. May I look closer?

Q. Yes. A. There is a nub, I believe we rely on these nubs—I didn't work on this case, but I believe we have a nub, a depression in one member and another fitting down into that depression in the other.

Q. With the shank underneath this plate member, then can you point out the nub that you are talking about? A. It shows here (indicating).

Q. The shank isn't in this clamp? [386] A. No.

Mr. Morris: Mr. Gold, would you like to have a Cockshutt drawing to use in connection with that?

Mr. Gold: Well, I don't think so.

Mr. Morris: I have them here.

Mr. Gold: I think from what he said it is clear as to the connection.

Q. (By Mr. Gold) Would a nub connection be like a screw? A. Like a bolt, you mean?

Q. Or like a bolt, yes, sir? A. Yes, less rigid than a bolt.

Q. Would a nub arrangement hold two parts together like a bolt would, as the gray bolt in either the 798 patent or the Deere 650 series device? A. It has some longitudinal motion, it can be fitted tight so there is little play between the two members.

Q. I believe you were asked about Element 6 of the Claim 1 in connection with the 650 series, and I think you were asked about the mechanical element as specified in that element. What is the mechanical element that you find in the Deere 650 series that responds to the Element 6? A. "means having connection with the forward end of the shank and with the other end of the coil spring whereby the spring yieldably maintains said normal contact of [387] the upper face."

Now I think I stated that literally this element isn't present, but the shank is bolted to the pivoted member and the spring is attached—is it 650 you are asking about?

Q. Yes, sir. A. The spring is attached through the spring bolt to the bottom.

The Court: The spring is attached to the pivot member in 650?

Mr. Gold: No, sir.

A. No. No, I thought we were talking about—

Mr. Gold: The 650 series, sir, is attached to the clip.

A. Actually the attachment is similar between the 798—

The Court: The spring is attached to the shank?

A. Yes, below the shank.

The Court: In the 650, and 100 is attached to the hinge member?

Mr. Gold: That is correct.

Q. (By Mr. Gold) Now, I understood you to say the literal element is not present? A. It is the latter part of

this element which says that it maintains the plate portion of the shank attaching [388] member with the underface of the fixed member to maintain the normal plowing depth. That element is there literally, if you accept our small nub as an underface.

Q. If you accept your interpretation of Element 1, you mean? A. Yes.

Q. What would be your opinion about the mechanical equivalency of Element 6 being present in the Deere 650 series? A. Well, if they are there literally of course they are mechanically equivalent.

Mr. Gold: That is all.

Re-Cross-Examination by Mr. Morris.

Q. Mr. Fenton, I believe that most of what has been covered here on re-direct we have covered in full on my cross. However, I believe one or two somewhat different subject matters have been raised I would like to discuss with you just a moment.

You have been asked here if the individual elements disassociated from their place in the structure have any meaning, and of course you have stated just old elements without their proper associations mean nothing as far as this controversy is concerned. You [389] also have stated, I believe, that their association is where they achieve some significance as structural elements, is that true? A. Right.

Q. And it would likewise follow, would it not, that their association as defined in the structural elements of the claims would be of significance in determining the importance and position of the association and the function which they perform in that association, would it not? A. Certainly.

Q. And it would determine how they cooperate with each other in that particular association, would it not? A. It should, yes, sir.

Q. So that when we are searching for the particular association that has significance insofar as this structure is concerned we are looking at the association as it is set out in the elements of the claim, are we not? A. And also in the mechanical structure.

Q. Of course we are not construing—we don't arrive at interpretations or make-up of elements by looking at mechanical structures, we must look at the word that we are trying to apply, mustn't we? A. I suppose. Well, we look at both of them.

Q. You determine whether the particular association [390] described is applicable to a structure, yes, but to determine the association as defined we must look at the claims, mustn't we? A. Yes, sir.

Q. One other point I believe has been raised here, in asking about the 798 structure, as to whether or not there is anything besides the forward fastening bolt which prevents the shank from being pulled out of the structure, and you stated yes, if the fastening bolt became loosened or fell out or something, then the spring rod itself could perform in that fashion because it passes through the shank and through the hinge member and in that way would keep the shank from pulling all the way out? A. That is right.

Q. In studying this patent, Mr. Fenton, the specifications of the patent and the drawings and the claim, do you think that any such function for this spring member was fairly intended? A. No, I don't think so.

Q. It obviously was not. That was one of the precise problems which was trying to be solved, to get away from, the pulling load being borne by the spring rod, wasn't it? A. Well, possibly, but a convenient location for it I [391] think was the main reason for it being placed there.

Q. Yes, I know it may be convenient, but wasn't that one of the very defects that we talked about here in 811, that is, the pulling load is borne by the spring rod? A. Well, that was a defect, yes.

Q. And furthermore, in 811 you had two supporting surfaces, a top surface for the pin, the fixed member, and a lower surface or support, the hinge member, to support that pin as the shank pulled back against it, didn't you? Is that true? A. That is true.

Q. Now, since the plate in 798 has been shifted to a position above the shank, then the lower support for the rod is gone, isn't it, and if the bolts were taken out, then the entire pulling load of that shank would be down on

the bottom end of the pin and without anything to support it, wouldn't it? A. You would still have the sheering strength of the pin.

Q. But wouldn't you be bending it around a single point? It would be stuck up here in the fixed member, the pulling load back on the bottom end of it? A. Yes.

Q. And it would inevitably bend it and make the device inoperative, wouldn't it? A. Well, very likely, yes. [392] Q. So that certainly was no intended function of the spring rod in the 798 structure, was it? A. No.

Q. And you find no mention of any such function in the specification or claims or the file history, do you? A. No.

Mr. Morris: Thank you. That is all.

(Witness excused.)

Mr. Fishburn: Your Honor, we have no more witnesses on our prima facie case. I would, however, like to introduce our exhibits.

First, Plaintiffs' Exhibit A is a copy of the patent in suit.

B and B-1 through B-10 are the minutes of the meetings of the Board of Directors of the plaintiff, Graham Plow, Inc.

C is the Jeoffroy HT-5 spring clamp.

D is the Jeoffroy HT-5-A.

Then we have Plaintiffs' D-1, which is a hinge member of the Jeoffroy HT-5-A.

E is Jeoffroy clamp HT-6-AD. Then we have E-1, which is the hinge portion of HT-6-AD.

Mr. Morris: May I point out, Mr. Fishburn, that if the Court gets to examining these physical matters at a later time, that the particular hinge [393] member which is identified as Plaintiffs' Exhibit E-1 is somewhat longer than the hinge member in Exhibit E, this particular one being for a square tubular beam type plow, and the result is that the hinge member is approximately an inch longer, and it will not precisely interchange with that in the clamp itself. Otherwise there is no difference.

Mr. Fishburn: As Plaintiffs' Exhibit F, the drawing of the 798 patent device, made by Rose Proctor, which is referred to in the stipulation. That was March 19, 1950.

* * *

Mr. Fishburn: And as Exhibit G, the drawing of May 16, 1951, of the 798 device made by Rose Proctor.

The Court: Pardon me just a minute, Mr. Fishburn. In this stipulation do you stipulate and agree upon the introduction of the different Plaintiffs' exhibits that you have enumerated, and have enumerated in this stipulation?

Mr. Fishburn: No, we don't stipulate that they may be introduced without objection. We just [394] identify them. We stipulate that they are these devices and drawings and papers.

Mr. Morris: Your Honor, I have no objection to the admissibility of those documents which have been attached. The only objection I have is to Plaintiffs' Exhibit G.

The Court: What is Plaintiffs' Exhibit G?

Mr. Fishburn: G is the drawing which is attached to that stipulation. It is next-to-the-last paper on the stipulation.

The Court: Yes, I see.

Mr. Fishburn: Then H is the paper following it, which is also a drawing made by Rose Proctor, May 19, 1951.

The Court: The other drawing was March 19, 1950?

Mr. Fishburn: The first one, which was F, was March 19, 1950. G is May 16, 1951.

The Court: Those dates don't appear on the exhibits, do they?

Mr. Fishburn: No, they do not. They are in the stipulation.

Mr. Morris: Your Honor, on those photocopies there, the dates are unreadable, but I have no hesitation in stipulating, as we have set out there, [395] that if that witness were called she would testify to those dates. But of course I don't agree to the truth of her testimony, or stipulate as to the truth of it.

Mr. Fishburn: Then you have up through H, Your Honor?

The Court: Yes. What is the date on the drawing H?

Mr. Fishburn: May 19, 1951.

The Court: G and H are the same date?

Mr. Fishburn: No, there is three days difference.

Mr. Morris: G is May 16th.

Mr. Fishburn: The 16th and 19th.

The Court: But these are all drawings of 798 patent?

Mr. Morris: Yes.

The Court: All right.

Mr. Fishburn: Plaintiffs' Exhibit I is the spring clamp of the John Deere 650 series, and Plaintiffs' Exhibit J is the John Deere 100 series.

As the Plaintiffs' Exhibit K, the pamphlet of the Deere 900 series. It was identified as Exhibit A in some interrogatories.

The Court: Defendants' pamphlet, do I [396] understand?

Mr. Fishburn: That is right.

As Plaintiffs' Exhibit L, a colored chart of the 798 patent Claim 1 applied to the 650 series.

Plaintiffs' Exhibit M, colored chart of the 798 patent Claim 1, applied to 100 series.

Plaintiffs' Exhibit N, colored chart of patent Claim 2, applied to the 100 series.

In addition to those exhibits, I want to introduce as part of the plaintiffs' prima facie case what have been referred to here and marked as Defendants' Exhibit 32, which is correspondence produced during the taking of depositions of the employees at Moline, Illinois, of Deere & Company.

Defendants' Exhibit 33-A, drawing XCA-318-N. 33-B, a drawing—I don't have any other identification of that right at the moment, but I think it was one that went along with 33-A, one of the first drawings of the 650 series.

And Defendants' Exhibit 34-A, drawing attached to letter of October 23, 1953, which is part of the correspondence with Exhibit 32.

And Defendants' Exhibit 34-B, which is also a drawing attached to that same letter.

Defendants' Exhibit 38—38 was the drawing [397] XCL-134-N.

Defendants' Exhibit 39, drawing XCL-135-N.

Defendants' Exhibit 41, drawing which was attached to a letter in correspondence, letter being dated December 8, 1953.

Defendants' Exhibit 42-A—

The Court: Is that attached to the letter of November 8th?

Mr. Fishburn: December 8, 1953.

Mr. Morris: That drawing has the number XCL-136, Your Honor.

Mr. Fishburn: Defendants' Exhibit 42-A is a drawing attached to a letter of January 4, 1954, in the correspondence of Exhibit 32.

Defendants' Exhibit 42-B, drawing of the pivoted part of the clamp. 42-C is a drawing of the casting which the spring sets on. 42-D is a drawing of the washer or cap at the upper end of the spring. 42-E is a drawing of the coil spring. 42-F, drawing of the U-bolt, sometimes referred to as the spring bolt. 42-G is the drawing of the shank or standard. 42-H is a drawing of the retainer clip.

Defendants' Exhibit 44, copy of the Hunter patent, which is issued on the 650 series.

Defendants' Exhibit 45-A, drawing of the [398] fixed member, and was referred to in the letter of April, 1958. I didn't get the particular date, but I think that is the 100 series, is it not, Mr. Morris?

Mr. Morris: That is right, initial drawing.

Mr. Fishburn: 45-B is a drawing of the pivoted member.

I might state, Your Honor, we will give you a complete list of these exhibits at the end of the trial so that you will have a complete identification of them.

The Court: Very well.

Mr. Fishburn: Now I will kind of backtrack a little here. Defendants' Exhibit 27-A, clamp, Deere 100 series.

Defendants' Exhibit 30 is a survey made by Deere & Company and dated March 30, 1953.

Defendants' Exhibit 31 is a survey of Deere & Company dated April 17, 1953.

Defendants' Exhibit 46, drawing final production model of the 100 series.

Defendants' Exhibit 49, sweep for attachment to the shanks of the plow, which is one of the Graham sweeps that was marked here.

I think that is all. We offer those, Your Honor.

[399] Mr. Morris: We have no objection to the admissibility of those exhibits.

The Court: They will be admitted.

(The following exhibits, so offered by plaintiffs, were received in evidence: Plaintiffs' A; B; B-1 through B-10; C; D; D-1; E; F; G; H; I; J; K; L; M; N; Defendants' Exhibits 27-A; 30; 31; 32; 33-A, 33-B; 34-A, 34-B; 38; 39; 41; 42-A, 42-B, 42-C, 42-D, 42-E, 42-F, 42-G; 44; 45-A, 45-B, 46 and 49.)

Mr. Fishburn: Plaintiffs rest, Your Honor.

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[400] DEFENDANTS' CASE

WILLIAM T. GRAHAM, called as a witness on behalf of the defendants, was duly sworn and testified as follows:

Direct Examination by Mr. Morris.

Q. You are William T. Graham? A. Yes.

Q. You reside in Amarillo, Texas? A. Yes.

Q. You are the patentee of the patent 798 which is here in suit? A. Yes.

Q. It was issued to you? A. Yes.

Q. You also have some official capacity with the plaintiff, Graham Plow Company? A. Yes.

Q. You are president of that company? A. Yes.

Q. Mr. Graham, you first got into this plow manufacturing business approximately 1939, when you bought out Mr. Fred Hoeme, over at Hooker, Oklahoma, did you not? A. Yes, sir.

Q. And at that time Mr. Hoeme was manufacturing a plow [401] generally of the chisel type, as we have described here, was he not? A. Yes.

Q. And he had at least one patent upon the general chisel type plow which was being manufactured at that time? A. Yes.

Q. And when you purchased it you moved the company to Amarillo, Texas, and operated as an individual for some period of time, did you not? A. That is right.

Q. And then subsequently organized corporations, the first corporation being shown as Graham-Hoeme Plow Company, was it not? A. Yes.

Q. And there has been some evolution of those corporations and it is now called Graham Plow, Inc., is it not? A. Graham Plow, Inc., yes.

Q. The corporation is organized in Texas and its home office and principal place of business is Amarillo, Texas, is it not? A. Yes.

Q. Mr. Graham, before you moved up into the rock country and started selling plows in the rock country, the glacial areas to the north and northwest in the United States, you had no particular trouble with the plow [402] insofar as the operation of the shank and the clamps to attach the shanks to the beam of the plows, and so on, is that correct? A. That is right.

Q. During that period of time your plow had what we call or what we have called here the rigid type or fixed type clamps which attached to the forward end of the shank, to the crossbeam, transverse beam of the plow frame? A. That is right.

Q. With a shank of that sort rigidly attached to the plow frame in that manner, there was a resilient or trembling or vibrating action of the shank itself as it traveled through the ground, was there not? A. That is right.

Q. And with a curved spring steel shank of the sort here it has a certain amount of resiliency by its very con-

struction and it permits the plow tool to vibrate or pump or tremble? A. Vibrate slightly.

Q. As it goes through the ground. All right. There is of course in that type of shank a certain amount of stretch or resilience which will permit it to clear obstructions that are not too great, such as a hard spot in the ground or a small rock, it can stretch out [403] somewhat and pass over that type of obstruction, can it not? A. I wouldn't say it would stretch out.

Q. Well, will it flex back here in the curved portion of the shank, will it flex some? A. Yes, it would pull backward.

Q. It would pull backward so that the plow point, chisel point or sweep, whatever it happened to be, could to some extent clear obstructions? A. If it pulled back too much it would take a set.

Q. If it stretched beyond the resilient limit it might take a set? A. And as it fatigued it would take a set anyhow.

Q. Now as those plows went into the north country and you got into the glacial rock country, you immediately had breaking trouble, did you not? A. That is right.

Q. You bent the flanges of the frames, broke some shanks themselves, bent and broke chisels? A. That is right.

Q. And to respond to that rock problem, your spring clamp structure which has been called 811 here was devised, was it not? A. That is right.

Q. And you filed an application and obtained the 811 [404] patent on that initial structure? A. Yes.

Q. You devised that clamp sometime in 1946 and the patent issued in 1950? A. I don't remember the dates.

Q. Well, it was along about 1946 that you made your first of those, wasn't it? A. I believe that is right, Tom.

Q. It was after the end of World War II, wasn't it?

Mr. Fishburn: For the record, it was February 26, 1947.

Mr. Morris: I wasn't asking about the application, I was asking for the time he made the first one.

Q. (By Mr. Morris) You made the first one sometime in 1946 you think? A. Tom, I don't have those dates in my mind.

Q. Well, '46 or '47 is close enough to suit me. It was one of those years, wasn't it? A. I just don't remember.

Q. You don't remember? A. No.

Q. All right. You manufactured that clamp and employed it on the plow implements, machines that went to the rock country from then on, didn't you, for some period of [405] time? A. Yes, we have manufactured a spring clamp ever since.

Q. Well, you manufactured the 811 type clamp and sold it for some number of years, did you not? A. Yes, and then we changed it some. We got other patents and changed them.

Q. Is it true or not that you did manufacture and sell, or one of your corporations did, the 811 type clamp for some number of years? A. Yes.

Q. Now, you have heard the description given here by Mr. Fenton as to the operation of that 811 clamp, have you not? A. Yes.

Q. You have been sitting here in the courtroom? A. Yes.

Q. And would you agree with that description as to the operation of the clamp as reasonably accurate? A. Yes.

Q. Now, in that clamp you had some rather severe wear points, did you not? A. We had some wear. I think it was exaggerated. I think you exaggerated it quite a bit.

Q. Well, we will find out about that as we go along. What I would like to know right now is if you didn't have [406] some wear points? A. Yes, we had slight wear.

Q. Where did you have some wear in the clamp, Mr. Graham? A. When the shank would pull back against the spring bolt it had a tendency to cause wear.

Q. Where did it cause wear? A. On the spring bolt and the hole the spring bolt goes through and the clamp.

Q. Caused wear on the bolt itself and it caused wear on the fixed part of the clamp where the bolt bore back against the clamp and had a sliding action, is that true? A. Yes, we had some wear there. But it was a very successful clamp.

Q. I am not asking you about successful, I am asking you about wear. That is true, isn't it? A. A little wear.

Q. Where else did you have some wear? A. Tom, that is the only place that I think that I remember having any wear, to speak of.

Q. Do you remember any wear on the rear portion of the clamp where the shank pivoted on it? A. Slight wear there, yes.

Q. Did you have any impeding of the spring action because of the binding effect on the spring rods, so that the [407] spring didn't travel up and down as easily as it was supposed to? A. No, I think the action, that was maybe more free for that construction.

Q. Well, you didn't have any binding of the spring rod? A. No.

Q. In your 811 structure? A. No. Well, there might have been a slight drag but I wouldn't call it binding.

Q. You don't think that the pressure back on that spring rod caused the device not to open and close as freely as you wanted it to? A. No.

Q. Is that all of the wear points or binding effects or operation that you had in the 811 type structure that you can think of? A. Oh, it is possible any place it moved to have a slight wear.

Q. You can't think of any others particularly though? A. Not that I would call trouble.

Q. When did you come to the design of 798? A. I don't remember the dates. It was sometime later.

Q. You are the man that did it? A. Yes.

Q. You can't remember when? [408] A. I don't remember the dates.

Q. Can you give us even an approximation? A. I don't have it in my mind.

Q. You don't have any memory about that at all? A. No. I don't try to remember dates.

Q. Do you have anything from which you can refresh your recollection as to when you first came to design 798? A. I don't know if we have it here.

Q. Do you want to inquire? A. Yes, I can inquire.

Q. I would like to have an answer.

Mr. Fishburn: If Your Honor please, it is stipulated in this stipulation that these drawings were made, one of them was March, 1950.

Mr. Morris: Now, excuse me, I don't mean to interrupt you, Mr. Fishburn. It is not so stipulated. The stipulation is that if Rose Proctor were called as a witness that is what she would testify to.

Mr. Fishburn: All right, I will accept that correction. That is all the information that we have here with us. We know that Rose Proctor would testify she made it on that date—

Mr. Morris: I object to the argument about what you may know.

Mr. Fishburn: You asked if we had any dates. [409] I am giving you what we have.

Mr. Morris: I asked Mr. Graham.

Mr. Fishburn: You asked him if he had anything here he could get. I am telling you what we have. Now if you want it, all right. If you don't, I will sit down.

Mr Morris: Well, I asked Mr. Graham if he had anything he wanted to refer to, and if you want to inquire as to what he wants to refer to, fine. All I am seeking is what this witness can testify as to the date that he first started to design this clamp.

The Court: That is certainly a proper question.

Mr. Fishburn: I agree, Your Honor. I was trying to help him. If he doesn't want it, let him go ahead with the witness.

Q. (By Mr. Morris) Well, I take it then, Mr. Graham, that you have nothing here that you can refer to that will help you recall? A. I don't have the dates and I don't know if it is in the courthouse or not. I will try to get it for you.

Q. All right. Will you do that at the first recess, please, sir. Then we will come back to that matter.

Can you associate it in relation to the time of the first Jeoffroy trial? [410] A. No, I don't try to remember dates. I don't have it in my mind.

Q. Can you even tell this Court whether you designed the clamp before the first Jeoffroy trial or after the first Jeoffroy trial? A. I am blank on it.

Q. You just don't know? A. No.

Q. You can't tell the Court whether information picked up during the course of the first Jeoffroy trial assisted you in designing the clamp? You can't tell the Court that? A. No. I don't try to remember those things.

Q. Can you tell the Court what the source of any of your design was that you put into the 798 clamp? A. Repeat the question, please.

Q. Can you tell the Court what the source of any of your design was that went into the 798 clamp? A. What do you mean by the source?

Q. Where did you get it? A. You mean the thought?

Q. Yes, where did the thought come from? A. In my work and thought on our problems and trying to make a better clamp.

Q. What problems were you working with? [411] A. The problem of a load—I thought it would make a better clamp to take the load off of the spring bolt, and to take the wear off of the upper structure above the shank and make it just a little more solid and not have quite so much looseness, and put the load on the fulcrum plate above and the pin at the back.

Q. What was the purpose of pulling load off the spring rod? A. It saved some wear.

Q. To save wear? Is that all? A. And the device that we made would maybe do many things, in connection with all the devices—the changes.

Q. Right now we are talking about one thing in particular, taking the load off the spring rod. You said it reduced some wear? A. Yes.

Q. What else did it change? A. By bolting the shank to the plate we took some load off the spring, we made a little tighter connection. I don't know that I could explain all the things that it did.

Q. Can you go back and see if you can answer my question and explain that one thing first before we pass to some others? My question is what were you trying to do in

taking the load off the spring rod besides reduce wear? [412] A. That is all I can think of right now, Tom.

Q. Have anything to do with freeing up the pivot, make it pivot easier? A. It might free it up a little.

Q. You know, as a matter of fact, don't you, Mr. Graham, that you had spring rods in your 811 structure that bent and they would bend so much sometimes that the device couldn't even close itself? A. Tom, I have never in my experience—I saw some you brought in, but I have never in all the sales I have made had any complaint to speak of. I have never seen what you talked about yesterday in all the plows we have sold.

Q. You have seen your spring rods in the 811 structure bend so that— A. I can't recall ever seeing a one bent. I don't remember exactly what you had in the courthouse, but you exaggerated it plumb out of the bounds of reason.

Q. Then it is your testimony that you didn't have any bent pins? A. No, I wouldn't say they didn't bend, but I am giving you my testimony that I have never had any complaint or I don't remember seeing any.

Q. You didn't ever have the spring rod then get in such condition that it impeded the pivotal action of the shank? [413] A. I don't remember seeing it or ever hearing of it, only your talk.

Q. What else then, what other changes did you make in 798 over 811?

Mr. Gold: If Your Honor please, I don't believe there is any showing he made any change in the 811 patent to make the 798. They are two different structures, two different patents, and there has been no showing there were changes made in 811.

Mr. Morris: All right, Your Honor, I will come at it in another way.

Q. (By Mr. Morris) What were the problems you were trying to solve in designing 798? A. Tom, I wasn't trying to solve problems so much as I was to build a better clamp.

Q. In what respect were you trying to make the clamp better, beside those we have already mentioned, to elimi-

nate the wear and make a little freer acting rod? A. I was trying to avoid some wear at the front and at the back.

Q. All right. What did you do, what changes did you make over 811 to produce 798 and to answer those problems you were seeking to solve? A. We moved the fulcrum plate from the lower side and put it on top of the shank to carry the load, and moved the [414] fulcrum pin to the top, and we bolted the shank to the fulcrum plate in front of the spring.

Q. Anything else? A. That is the main things I can think about.

Q. Whose idea was it to incorporate the loop or stirrup member into the structure? A. I don't remember.

Q. Do you remember which one of the men in the plant there it was that suggested the use of the loop or stirrup member to hold the shank at the rear? A. All the elements in that thing, as far as I can remember, was my idea.

Q. Oh, they were yours? You don't remember who suggested it, but it was your idea? A. I don't think of anyone suggesting anything.

Q. Well now, if it was your idea, Mr. Graham, I don't suppose you would have any difficulty thinking about who it was that suggested it, would you? A. If I thought of it myself?

Q. Yes. A. I would think of who did suggest it?

Q. Yes, sir. A. I don't get you. If I thought of it, someone else didn't suggest it.

Q. Well, you were searching your memory just a moment ago for [415] who it was that may have suggested to you the idea of putting the loop at the rear of the hinge member to hold the shank, weren't you? A. No, you misunderstand me.

Q. Is that right? A. Yes.

Q. All right. Well, now then, at the time of the first Jeoffroy trial in 1951, what was your attitude toward locating the pivot pin about the hinge member and above the shank rather than below it? A. At what time did you say?

Q. At the time of the first Jeoffroy trial in April, 1951. A. It would be the same then as it was when I invented it, that it would improve it.

Q. It was your idea that it would improve it? A. Yes.

Q. All right. It was your idea that by locating the pivot pin above the shank you could have a freer acting pivotal member and you could transmit the forces into the body of the clamp a little better, is that right? A. Tom, as I stated, I thought it would avoid some wear.

Q. Well now, answer my question, please. In locating the pivot pin above the shank, your attitude toward it at the time of the first Jeoffroy trial in April, 1951, was [416] that it would improve the clamp? A. Right.

Q. And would make a freer acting pivot, is that true?

Mr. Gold: If Your Honor please, what is he talking about? Are you talking about the 811 or the 798?

Mr. Morris: Talking about moving the pivot pin up above from the position where it was before.

A. In which clamp?

Q. In designing this new clamp. A. 798?

Q. Yes, sir. That is what we are talking about, isn't it? A. We moved it up there to prevent wear and make a better clamp, of course.

Q. Better in what respect? A. To avoid some wear at certain points.

Q. You have said that. What else? A. That is about all I can think of right now, Tom.

Q. To make the pivot operate any better? A. In a way it might.

Q. That was your thought about it in April, 1951, at the time of the first Jeoffroy trial? A. Yes, I would say that it is possible that that was my thought then.

Q. Well, that is your thought now, you think that has [417] been your thought all along, don't you? A. Yes, to some extent, Tom.

Q. All right. I would like to refresh your memory, Mr. Graham. I would like to refer you to your testimony in the first Jeoffroy case from the printed record, Volume I

of Case No. 14,227 in the United States Court of Appeals, commencing on page 153, these questions were asked:

"Question: Mr. Graham, does it make any difference whether the pivot on the shank on the spring trip is above or below the shank?

"Answer: The pivot point?

"Question: Yes.

"Answer: Well, it has the pivot point above and below. It pivots above and the fulcrum plate pivots below it."

Then followed a discussion about terminology as to a spring trip as distinguished from a spring clamp. Then on page 155:

"Question: Well, Mr. Graham, to get back to the original question, whether you call it a spring trip or a spring clamp, does it make any difference in that kind of device whether the pivot or the shank is above the shank or below the shank?

"Answer: Well, this shank, the fulcrum plate pivots under it; and the shank pivots around the part of the [418] clamp above it, the beam.

"Question: Now, Mr. Graham, please answer the question. I am not asking you about your particular clamp. I am asking you if any spring clamps of that type, if it makes any difference whether the pivot on the point is above the shank or below the shank.

"Answer: Well, any shank that pivots would have to pivot around something above it, I suppose.

"Question: Well, is it your answer that it makes any difference whether you put the pivot point above or below the shank?

"Answer: You got to have something to hold the shank down, if I understand it right. It pivots around whatever is above it.

"Question: Well, Mr. Graham, you will agree you have to have some kind of a pivot for the shank—if you have a pivoted shank, you have to have a pivot. Now, you could attach that to a pivot member with the pivot above or below the shank—or could you drill the shank and put the shive on the pivot through the shank?"

Then followed a discussion about the problem of altering the shank in some way. Then:

"Question: What would happen if you put the pin below the shank and welded it to it?

"Answer: I think it would break.

[419] "Question: Now, that is because you don't want, you don't like welding something to an alloy spring clamp or spring shank. But if the pivot pin were attached in some other way then by welding so that it didn't weaken the shank, would it make any difference whether the pivot pin was above or below the shank?

"Answer: If it's fastened to the shank?

"Question: Well, whether it is fastened to it or whether the shank simply rests against it, does it make any difference whether the pivot pin is above or below the shank?

"Answer: It would be harder to hold, the pin would be a lot harder to hold, in my estimation.

"Question: It would be harder to hold if it were where?

"Answer: Above it."

Mr. Gold: If Your Honor please, I think to make it proper counsel should tell what clamp Mr. Graham was testifying about in the testimony he just read.

Mr. Morris: I am sure the only patent involved in that lawsuit was the 811. We hadn't come to 798 yet. My question is what your attitude was about the location of the pivot point above the shank at that time. Now, having heard that rereading of your testimony in the first case, are you still saying now that at the time [420] of the first Jeoffroy trial you already had the feeling or the idea that locating the pivot pin above the shank would improve the structure? A. In a way probably.

Q. And would make it a better device? A. In a way.

Q. Is that what you testified to in that case, that I just read to you? A. I don't know that I exactly said that there, but it is possible that—

Q. You were indicating exactly the contrary feeling about locating the pivot pin above the shank, weren't you?

A. I said there the pivot pin would wear more if it was above it.

Q. Didn't say it would wear, you said it would be harder to hold, didn't you? A. Well, that would result in wear.

Q. Then moving the pivot pin above wouldn't solve any wear problem, it would increase the wear problem? Is that your testimony? A. It would increase the wear on the pin above what it would be if the pin was underneath. If all the pressure and the weight was up against the pin, the pin would wear more than it would if the pin was underneath and didn't have anything to do but hold the fulcrum plate [421] forward.

Q. So to improve your 811 clamp and answer some of the problems that you had with it, you situated your pin where it would wear worse, wear more? A. There are many points there to consider.

Q. All right. Now then, I wish you would just tell me, tell the Court what you first did when you set about designing 798. A. I don't know that I remember exactly. I had the thought and of course we made the drawings and we made a sample.

Q. When did you make the sample? A. I don't remember that date.

Q. Do you have any idea when the date was? A. No.

Q. What else did you do? A. That is all I can recall just now.

Q. Some drawings were made and a sample was made? A. Yes.

Q. Is that it? A. Yes.

Q. Did you ever get it in form to take it out in the field and test it? A. Yes.

Q. When did you do that? [422] A. I don't remember the date.

Q. Was it 1962? A. We tested in the shop first and I don't think we ever went to the field with it till this trial came up.

Q. 1962? A. Right.

Q. So from whenever it was, sometime before you filed the patent application, you had never taken one of them

to the field until just before this trial in 1962? A. Right.

Q. And you have never manufactured one of them? A. Yes.

Q. Never sold one of them, that has been stipulated here in the evidence, that it has never been manufactured and sold.

Mr. Fishburn: If the Court please, I think it has never been sold, it has been manufactured.

Mr. Morris: You have stipulated to the contrary, that is has never been manufactured.

Mr. Fishburn: Never been sold.

The Court: What is the stipulation, manufactured and sold, in the conjunctive or in the disjunctive? What is the number of the stipulation?

Mr. Morris: Well, I suppose it could be disjunctive. I don't know whether—

[423] The Court: No. 3 says, "spring clamps in accordance with patent 798 have never been manufactured or sold by W. T. Graham."

Mr. Morris: That is what I thought.

Mr. Fishburn: I am sorry, I thought it was "and."

Q. (By Mr. Morris) So you have stipulated that it has never been manufactured or sold, and now is there something different about that? Have you now just before this trial gotten one into manufacture? A. Yes.

Q. Do you have one here? A. Yes.

Q. Will you let us see it, please? A. Yes. It is over there (indicating).

Q. Would you mind stepping over here and identifying it, please.

Mr. Fishburn: If Your Honor please, I would like to read this Paragraph 3. It states, "Spring clamps in accordance with United States Patent No. 2,627,798 have never been manufactured or sold by the Wm. T. Graham, Graham Plow, Inc., or its corporate predecessors." I am not sure that this clamp is exactly in accordance with this patent. In any event, this stipulation was started before this [424] clamp was made and I didn't notice the wording of that claim was "or" instead of "and", so that is how the

error came about. This clamp was just recently made and is a factory made clamp.

The Court: Is that made in accordance with the specification for the 798 patent?

Mr. Fishburn: It is possible it could be read on the claims in the patent, yes.

Mr. Gold: It has different features, Your Honor, than what is shown in the drawings of the 798 patent.

Mr. Morris: Are you finished with the explanation?

Mr. Fishburn: Yes.

Q. (By Mr. Morris) Then so our record will be straight, Mr. Graham, the nearest thing that you are willing to say that has been manufactured by the Graham Plow Companies that might be in accordance with the 798 patent is this great big device here which has a tag on it that says, "Field tested April 3, 1962." I will identify that as Defendants' Exhibit 50.

Mr. Gold: If Your Honor please, I would like to state Mr. Graham also has another patent No. 2,935,148, which I think applied to the clamp. Issuance date was May 3, 1960.

[425] Q. (By Mr. Morris) Now, to return to my question, Mr. Graham, the device which I just pointed out and which will now be marked as Defendants' Exhibit 50, is that the only type clamp that you have ever made, your companies have ever made, which you think might be in accordance with the teaching of this 798 patent? A. That is right.

Q. And the first one of those to come out was April, 1962? A. I don't remember the date, but I think that is about right.

Q. All right. So then for the period, whenever it was that you first had this idea for 798, down until April, 1962, it had never been taken—one of them had never been to the field and tested, had it? A. That is right.

Q. And all of these improvements to make a better operating structure, to eliminate wear, which were incorporated into 798, you didn't put into the field, did you? A. We improved our other clamp and didn't put that one in the field.

Q. You continued to manufacture and sell a clamp of the general sort, type, of 811, didn't you? A. We improved that clamp, yes.

Q. You improved that clamp by fastening the shank and the [426] bolt together to take the pull off the spring rod, just like Jeoffroy had done back before that trial, didn't you? A. I don't remember what he did.

Q. And you incorporated a means for taking the pull off the spring rod in your 811 type of structure, didn't you? A. Yes.

Q. You left the pivot pin down below the shank? A. Yes.

Q. And you left the plate down below the shank? A. Yes.

Q. And you left the shank still so that it had a floating type of movement between the underface of the fixed member and the upper face of the hinge member, didn't you? A. To some extent, yes.

Q. All right. Now, I want to be very specific about this particular matter, and I want to see if this is not entirely accurate. The changes made in your 798 structure as shown in the patent over your 811 structure were four in number. 1, the plate was moved above the shank. 2, the pivot pin was located above the shank. 3, A bolt was provided to fasten shank and plate together at the front and take the pulling load off the spring rod. And 4, a stirrup or a loop element was [427] added at the rear of the plate to support the shank in that position—in that area. That is all of them, isn't it? A. I believe that is right. That is all I can think of now.

Mr. Morris: Your Honor, I will pass this witness for the moment. I want to come back on the matter upon which he is going to refresh his memory, if he can, after the recess.

Mr. Fishburn: We have no cross-examination at this time, Your Honor. We might have later.

* * *

(Recess.)

Q. (By Mr. Morris) During the recess, Mr. Graham, have you checked to see if there are any records here from

which you can refresh your memory— A. Yes.
[428] Q. —and recall when you first commenced the designing of the 798 clamp? A. Yes.

Q. What have you checked, please? A. I read the records of a trial, and I testified that—

Q. Just a minute. You have refreshed your memory from the record of your testimony in the second Jeoffroy case, I take it? A. That is right.

Q. All right. And what is the date that you now say you commenced the designing of your 798 structure? A. In March, 1950, was when the girl made the drawing, and I must have—I made a pencil drawing, I remember, it must have been—at least it was some time before that. I would say sometime late '49.

Q. Then the first drawing that you have that can be produced here is the one that has been attached—or photostatic copy of which has been attached to the stipulation and is the drawing dated March 16, 1950? A. Right.

Q. And that of course was approximately—that date is approximately three weeks before the beginning date of the first Jeoffroy trial, isn't it? You will recall the first Jeoffroy trial was April 9, 1951. A. I don't have that date in mind.

[429] Q. In order that we don't have any quibble about the date, I have the printed record here which reflects that the trial commenced—"Be it remembered that on this 9th day of April, 1951, the above entitled numbered cause came on for trial before the Honorable Joseph P. Dooley." So you wouldn't question the fact that the beginning date of the trial was April 9, 1951, would you? A. No.

Q. All right. Then do you think you had your idea complete, fully developed, for the 798 structure at the time that drawing was made on March 16, 1950? A. Now, I made the pencil sketch before that, and the way I remember it, it must have been about December 1949, sometime in December.

Mr. Morris: Will you read my question back.

(Question read.)

A. We had it complete as far as the drawing would show, I suppose, I don't remember exactly.

Q. Well, did you have your mind made up and crystallized as to what was going into the structure of the 798 clamp at that time? A. It should reflect on the drawing, Tom. I made some pencil sketches and then I made the drawing, and it should reflect in there.

* * *

[430] Q. (By Mr. Morris) Mr. Graham, will you look at the photostatic copy of the drawing, which is attached to the stipulation here, which is marked Plaintiffs' Exhibit F. That is the drawing which was dated March 16, 1950, isn't it? A. That is what this shows, yes.

Q. Does that drawing dated March 16, 1950, reflect the complete 798 structure? A. I couldn't testify that it does.

Q. Do you know what that drawing shows, Mr. Graham? A. Yes. I couldn't say this is complete. It looks like it is.

Q. You couldn't say it is complete? A. I believe it is.

Q. What did you tell the draftsman when you assigned her the job of making that drawing? A. I don't remember exactly what I told her, but I give her a pencil sketch.

Q. Do you remember if you told her what to put in it? A. I give her a pencil sketch and I believe this reflects it.

Q. Then are you willing to say that your idea for the 798 structure was complete at that date, March 16, 1950? [431] A. To the best of my judgment it was.

Q. Yet in April 1951 you testified, as we have already shown here, that you thought the location of the pivot pin above the shank would not be nearly as good a structure, didn't you? A. I testified what, Tom?

Q. That you thought the location of the pivot pin above the shank would not be nearly as good a structure as having the pivot pin below the shank? A. When did I testify that?

Q. I read it to you here in the record awhile ago. A. I don't remember testifying that.

Mr. Morris: That is all, Mr. Graham.

Mr. Fishburn: No cross-examination of this witness.

(Witness excused.)

[432] CLARENCE T. FISHLEIGH, called as a witness in behalf of the defendants, being duly sworn, testified as follows:

Direct Examination by Mr. Morris.

Q. Mr. Fishleigh, state your full name, age and residence address, please. A. Clarence T. Fishleigh. I am 66. I live in Deerfield, Illinois.

Q. What is your occupation? A. I am a consulting engineer, registered as a professional engineer in a number of states, including Illinois, Ohio, Michigan and others.

Q. Do you have a regular office from which you conduct your business occupation? A. Yes, I do.

Q. Where is that, please? A. In Chicago, in the Engineering Building, at the corner of Wells and Wacker.

Q. How long have you lived in Chicago? A. This last time I have been there about ten and a half years. I was born and raised in Chicago.

Q. In your lifetime of education, training and experience, do you feel that you have had education and experience which would qualify you in any way to advise a Court [433] upon engineering matters such as may be involved in this case? A. Well, I believe that I have, yes, sir.

Q. Would you outline for us, please, what that training and experience is. A. After graduating from Lakeview High School in Chicago, I went to the University of Michigan and spent four years, from 1913 to 1917, in the college of engineering at that school. In 1917 I graduated with a degree of Bachelor of Science in electrical engineering just in time to get into the First World War.

Q. How long did you stay in service? A. About two years.

Q. What did you do while you were in service? A. Well, I served overseas as a bomber, navigator, gunner, observer. In those days, in the two-place machines we did everything except pilot.

Q. After your discharge from the Air Force then what did you do? A. I went to work for the Ford Motor Company.

Q. In what capacity? A. First I worked on regular production jobs, but was given the opportunity as a student production worker to work for a relatively short time on a great many different production operations.

[434] Q. While you were there did you do some work in experimental engineering, some work on research projects, things of that sort? A. Yes, I did, I was assigned to a number of such projects and my work in connection with those carried me quite regularly and extensively into a great many departments of the Ford Motor Company in Dearborn—or at that time in Highland Park, Michigan.

Q. Where did you go after leaving Ford Motor Company? A. I went with the American Car and Foundry Company in the division making automobile valves.

Q. What, generally speaking, were the type of duties that you had there? A. When I first went there I was in charge of their engine testing department, and then later, while still retaining my duties in connection with testing, I became assistant production manager.

Q. As I understand it, you are now primarily engaged in consulting engineering work, is that correct? A. That is correct.

Q. When did you start your occupation, profession, as a consulting engineer? A. In 1930.

Q. And have you followed that occupation continuously since that time? [435] A. Yes, sir, I have.

Q. As a consulting engineer would you outline for us, please, some of the types of jobs or experience or training that you have had that might bear upon your qualifications here. A. We have done two different general types of work. The first was what might be called a general consulting business along automotive and mechanical engineering lines, with particular reference to what might be called production, engineering of new products. In addition to that, I have done considerable work in connection with engineering testimony in patent litigation.

Q. As a consulting engineer have you had frequent opportunities to test new equipment, test designs and performance of equipment, things of that sort? A. Yes, I have tested new equipment and proposed equipment in lab-

oratories of a number of schools such as the University of Michigan, University of Detroit, Case School of Applied Science, Illinois Institute of Technology, New York University, and also in the laboratories of a number of industrial concerns and also on road tests and field tests.

Q. Have you in that experience had an opportunity to study patents, patent histories, file wrappers and [436] their contents from the standpoint of mechanical elements and claims of patents, structures disclosed, and so on? A. Yes, sir. I have studied certainly many hundreds of such patents and possibly even into the thousands.

Q. Have you testified in a number of patent cases? A. Yes, sir.

Q. In a number of different courts in the United States? A. Yes, sir.

Q. In various parts of the country? A. Yes, sir.

Q. Who are some of the clients for whom you have done consulting work? A. I have done consulting work for a number of individuals and small companies, a great many such, in fact, and also for a considerable number of large companies such, for example, as Ford Motor Company, Chrysler, General Motors, International Harvester, Linde Air Products, Sunbeam, and so forth.

Q. Are you a member of any professional societies or professional organizations? A. Yes, sir.

Q. What are they, please? A. I am a member of the American Society of Mechanical Engineers, the Western Society of Engineers in Chicago, [437] National Society of Professional Engineers, and I have been a member of the Society of Automotive Engineers for approximately 30 years.

Q. I believe you have already stated that you are a registered professional engineer in a number of different states? A. That is correct.

Q. Do you have any law training, Mr. Fishleigh? A. Yes, sir.

Q. Do you have a law degree? A. Yes, sir.

Q. Are you engaged in the practice of law in any way at this time? A. No, sir.

Q. Do you have any material, monetary interest in the outcome of this lawsuit? A. No, none whatsoever.

Q. What experience have you had with structures such as farm implements? A. I have been generally familiar with farm implements since I was 15 years old and had occasion to spend my summers and all vacation time on my brother's farm. I have been engaged in consulting work in several instances in connection with farm implements, and of more recent years have spent some time as a user on [438] farms that my brother-in-law operated and where I spent frequent time.

Q. Have you had occasion to become familiar with the particular types of ground working tools or implements that are here involved in this suit? A. Yes, I first became familiar with this type of implement in late 1950, and have done various things in connection with them at that time and more recently.

Q. All right. You of course testified as an expert or as an engineering witness for Jeoffroy Manufacturing in the first of the cases between Jeoffroy and Graham, did you not? A. Yes, sir.

Q. Involving the 811 type spring clamp patent? A. Yes, sir.

Q. And also involving the brace type clamp patent that was mentioned here a day or so ago? A. That is correct.

Q. You have not been a witness or a consultant in any of the subsequent cases between the Graham Company and the Jeoffroy Company, have you? A. No, sir, I have not.

Q. You have not been a consultant or a witness or you were not a consultant or a witness in the Cockshutt [439] case, were you? A. No, sir.

Q. Or were you a witness or a consultant in the Glencoe case which Graham filed against Glencoe Company? A. No.

Q. In preparation for your testimony in the first of the cases, did you conduct some actual field tests with the plows and clamps and shanks and so on in the form in which they existed at that time? A. Yes. I conducted field tests which were under my supervision and direction and in which I participated, and I also was present at

the time of certain inter-party tests out at Mr. Graham's farm, I believe it was, on his property, in connection with that trial, at which a considerable number of demonstrations were made.

The Court: Was that during the first Jeoffroy trial?

Mr. Morris: During the first Jeoffroy trial, Your Honor, yes.

Q. (By Mr. Morris) Now, since the conclusion of that case, have you had any further opportunity to examine, test or observe the plows of the sort we have involved here? A. Yes. I had occasion to see quite a number of different plows in operation in the so-called rock country up in [440] the neighborhood of Rock Lake, North Dakota.

Q. Was a specific trip made to the rock country for the purpose of observing the plows in operation, to observe the conditions and observe the performance of the tools, make some tests with them in connection with this case? A. Yes, sir.

Q. Have you studied the Graham patent 798 that is here in suit? A. Yes.

Q. Have you studied the file history? A. Yes.

Q. File wrapper and contents? A. Yes.

Q. Have you studied the patent references which were cited by the Patent Office in connection with the application? A. Yes.

Q. Have you studied the patents that have been cited by the defendant here in the answer in this case? A. Yes.

Q. Have you studied the Deere structures 650 and 100 which are here accused? A. Yes, I have.

Q. Have you studied other of the spring clamps that have been demonstrated here in the courtroom during the [441] past few days in recent months, such as the Graham 811. the Jeoffroy HT-5, the Jeoffroy HT-5-A, the Jeoffroy HT-6-AD, the Glencoe clamp which has been mentioned a time or two? A. Yes, I have.

Q. Do you feel that you have a good working knowledge of all of those structures as to how they perform and what their structure elements are? A. I believe that I have, yes, sir.

Q. Have you made a detailed comparison of the structure as disclosed in the Graham 798 patent with the two accused defendants' structures here? A. Yes, sir.

Q. Have you made a detailed comparison of the claims, the structure as defined in the claims of that patent as applied or in relation—as applied to or in relation to the two accused structures? A. Yes, I have.

Q. Before turning to a consideration of the 798 patent itself, Mr Fishleigh, I would like to ask you some questions about the prior art that existed ahead of Graham, that is, earlier in point of time, at least before his application or at some period before that. Have you studied those patents? A. Yes.

[442] Q. Have you made some drawings, colored drawings and some charts setting out some of the disclosures in those patents? A. Yes, I have.

Q. First I would like to ask you—well, actually it is quite clear, as shown by the evidence already, that the 798 spring clamp was not the first spring clamp for a chisel type plow? That is quite clear in the record already, is it not? A. Yes, I think that is quite clear.

Q. I wonder if even the Graham 811 spring type clamp was the first of the spring type clamps for the attachment of a ground working tool to the transverse member of a plow? A. Oh, no, it was not.

Q. Did that exist for some long period of time prior to even the Graham 811 disclosure? A. Oh, yes.

Q. Have you prepared, Mr. Fishleigh, any charts which will be helpful in pointing out and explaining such prior devices to the Court? A. Yes, I have prepared a chart which summarizes perhaps such showings and also some enlargements of the figures of said patents such as are shown on that summary chart.

Q. Will you take such charts and colored drawings or [443] enlargements as you may have, which you think will be helpful, and point out to the Court and briefly explain some of the representative prior art disclosures which show ground working tools or spring clamps for ground working tools. A. The first chart has been marked for identification as Defendants' Exhibit 11, and

it is a chart showing representative prior art disclosures of spring clamps for ground working tools, including one or more of the seven elements which are listed there, and the organization of the chart has been conducted in this way, that in addition to the title there are a number of photostatic reproductions of figures from various patents and drawings of some, in at least one instance or two instances, of prior use structures.

Q. Excuse me just a moment. Are those photostatic reproductions of patent drawings of patents which were either cited by the Patent Office or have been cited by the defendant here in its answer? A. Insofar as they are of patents that is true. In the case of the Jeoffroy SC-580 structure and the Glencoe structure they are reproductions of drawings which were made at least in the finished form at my office, based on the physical structures themselves.

Q. Are those drawings, however, accurate drawings of the [444] physical structures which you observed? A. Yes.

Q. And are they drawings of structures which have here been identified as prior use devices and have been so stipulated in the record? A. Well, they are drawings of structures which are here, and I don't know about the stipulation.

Q. Jeoffroy SC-580 is one covered by the stipulation, and the Glencoe is likewise one covered by the stipulation. Go ahead, please.

The Court: In what manner is it covered by the stipulation?

Mr. Morris: The stipulation as to the Jeoffroy SC-580, Your Honor, which is Defendants' Exhibit 2, is that it was manufactured and sold by Jeoffroy Manufacturing Company at least as early as January, 1949, and the stipulation as to the Glencoe structure, which has been identified as Defendants' Exhibit 3, is that it is a prior use structure which was manufactured and sold commencing with the design about the fall of 1949, and being actually placed on the market for sale and sold as early as March, 1950.

The Court: It is agreed then that these are prior art structures, these devices here?

Mr. Fishburn: Yes, sir.

[445] The Court: Very well.

Q. (By Mr. Morris) Go ahead, Mr. Fishleigh.

Mr. Fishburn: They are prior art as far as the 798 patent is concerned.

A. The first structure in point of time on this chart is the patent to Dunbar, United States Patent 211,003, which was issued in 1878. That structure is a disclosure of a spring clamp for a harrow. In explaining it I would like to refer to enlargements of the one sheet of patent drawings of that Dunbar patent which is on the easel and has been marked for identification as Defendants' Exhibit 12.

In this structure there is a frame of the tool member which is marked "A" in Fig. 1 on Defendants' Exhibit 12 and colored violet or light purple. Fastened to that frame member is a fixed member colored yellow and marked as "B".

Pivotally connected to that fixed member in such a way as to permit of pivotal movement is a hinge member "D", colored dark green on this chart. In addition to that there is a tool member "F" colored pink on this chart. In this instance the tool member extends generally in a vertical direction from top to bottom after the fashion of certain harrows as of that date.

[446] That tool member is fastened to the hinged member or pivoted member by means of a pair of bolts, "g", nuts "h", and a plate member "E". The bolts and the nuts and plate member are colored light green in these drawings.

One further element of this structure is a spring member taking the form of a loop marked "G" and colored orange in these drawings. Now, the arrangement is such that for normal operating conditions the spring member "G" exerts a force such that the pivoted member or shank attaching member is moved to the position shown in Fig. 1 where the bottom portion of it rests against and is stopped by the frame member "A", and in that manner is held in the ordinary working position for the tool.

Now, during operation there are two different forms of functioning can occur. In the first instance, there can be

a vibratory action on the part of the tool point and when and if some obstruction is encountered the arrangement is such that the point of the tool can move backward and upward so that upon continued forward motion, and I should say that in this structure the motion of the device is from right to left, as we see it on the drawings of Defendants' Exhibit 12, upon continued forward motion of the harrow framework, [447] as in those days of course pulled by a horse, that that tool member will clear the obstruction and once it has cleared the obstruction the spring member will force it back until the hinged member comes up against the frame and is stopped thereby and is held in normal operation.

Q. Mr. Fishleigh, do you find in the patent itself—do you have copies there before you? A. Yes, I have copies of the patent with me.

* * *

Q. (By Mr. Morris) Do you find in the Dunbar patent itself any reference to or description of the function or operation which you have just described to the Court? A. Yes. That is set forth I believe quite clearly, and I refer to the first page of the specification, the second column, and the second full paragraph.

Q. Would that be the paragraph just above the commencement of the claim paragraph? A. Well, just above —yes, the statement of "having described," and so forth.

Q. Will you read, please, that language.

Q. "The tooth applied in the manner above described will, [448] when working, continually tremble, and thus more thoroughly pulverize the soil, and will also, when caught by any root, stone, or other obstruction, turn backward enough to let the tooth pass over such obstruction and immediately enter the soil again."

Q. Now then, of the structural elements which you have set out in the block portion of the chart here of seven elements, how many of those do you find present in the Dunbar disclosure? A. I find all six of the structural elements set forth in the title of this chart present in the Dunbar structure.

Q. You say all six. Don't we have seven? A. Excuse me, I misspoke. All seven.

Q. All right. Does that complete your explanation of the Dunbar disclosures? A. I believe it does, unless you have some further questions.

Q. I believe that is all I think of that is particularly pertinent about it.

Will you consider the next of the devices which you wish to explain. A. The next one, in point of time at least, is the Cobb structure, shown in the lower right-hand portion of what I would call the main part of this chart.

Q. So we don't have any question about it, it is pretty [449] close to the lower center of the chart? A. Of the entire chart, yes.

Q. And it is labeled, of course, "Cobb," is it not? A. That is correct, and that is the Cobb patent 284,278.

Q. What is the date of that one, please, sir? A. That is 1883. This Cobb patent is also entitled, "Harrow", and here as in Dunbar we have a rectangular frame member. This one is marked "B", and again is colored violet or light purple.

Q. Excuse me just a moment, before going ahead with that, do you have a colored enlargement for Cobb? A. No, I don't.

Q. You did not make one for that? A. I did not make one for that. Fastened to the frame member is a fixed member marked "a", and perhaps we should refer to the other drawings of the Cobb patent as shown in the book of patents in order to get a better idea of the construction of that member "a". It is sort of a U-shaped member with eyes at what would be the left-hand end as we see it here in the Fig. 1, and that formation is shown particularly in Fig. 3 of the Cobb patent, and that fixed member is fastened to the frame member by means of bolts as shown here at the right or at the left end of that member.

At the right end of the structure, which [450] would be what has been referred to here, I believe, as the bight of a U-shaped member, that is, the lower cross portion of the U-shaped member, a hinged member "D", colored dark green, is associated. Now, that hinged member "D"

is shown particularly in perspective in Fig. 2 of the Cobb patent, and is shown to be a structure of relatively plate-like formation with a loop at the bottom to connect through the bight of the fixed member, small "a", again as it is shown perhaps best in Fig. 2 of the patent, has an opening or slot in that curved portion through which the upper part of the shank of the tool passes. The upper part of the shank of the tool passes through that opening in the hinged member and up alongside in contact with the longitudinal face of that hinged member, and then is bolted to the hinged member by means of the small bolts, unnumbered in this figure, but colored light green—about —oh, approximately midway from top to bottom of the dark green hinged member.

Q. Just a moment, before passing on there, Mr. Fishleigh. You mentioned a longitudinal face of that hinged member. Of course in our associated directions, as we have discussed them here, that particular face would be a vertical face in relation to the particular tool as shown by Cobb, would it not? [451] A. It would be a vertical face. It would be longitudinal of the axis or length of the shank member, but it would be a vertical face.

Q. Go ahead. A. That association of the shank with the hinged member provides a crossed pivotal connection between the hinged member and the fixed member. At the upper end of the hinged member there is a pin "r".

Q. Is that a small "r" ? A. Yes, I believe I am mistaken on it, though, it is not too clear here but I believe what that it is an "x", because down at the lower left end of the fixed member there is a seat which I know is "r".

In any event, there is a pin to which one end of a spring member "C" is fastened, that spring member being colored orange on this chart. The other end of the spring member is seated in a small seat "r" at the left-hand end of the fixed member "a", and upon the upper face of the frame member "B".

Now, this arrangement is such that the spring "C" exerts a force such that, tending to pivot the hinged member and the tool, the tool being marked "P", in a clockwise direction, about at the pivot point at the right-

hand end of the fixed member, and it pivots to that point as shown in these drawings where the [452] shank of the tool below the hinged member comes up against the side of the frame member as a stop, and limits the rotary motion in the clockwise direction and holds the tool in the proper operating position, as shown in full lines. But as the device is drawn through the ground if the point of the tool strikes an obstruction it will move backwardly and upwardly to a position such as shown in the dotted lines, and will move whatever distance may be required so that the tool will ride over and clear the obstruction.

Q. As it appears there on the chart, in its orientation on the chart, the leaf type circular spring would tend to—would it tend to move the upper end of the hinged member clockwise or to the right as shown in that drawing? A. Yes, it would tend to move it to the right, tending to move it from the dotted line to the full line position.

Q. And then would the forces on the ground working tool or the tool of the implement tend to force the tool in the opposite direction against the spring pressure? A. That is right. That would tend to move it from the full line to the dotted line position, and of course in the course of that movement would store kinetic energy in the spring and that energy would serve to return the tool back to its normal operating condition [453] or position as soon as the obstruction was clear.

Q. Now, in that particular structure, Mr. Fishleigh, as in the Dunbar structure which you have just previously described, would it be the frame member of the implement which provides the stop or base for determining the normal operating position of the tool? A. That is correct. In the Dunbar example, the frame, in cooperation or association with the hinged member, provides that stop function, and in the Cobb structure it is the frame in association with the shank of the tool that provides that stop function or positioning function.

Q. Could each of those structures be accurately described as having a rocking action? A. Yes, surely.

Q. The shank or ground working tool as having a rocking or pivotal action? A. Yes.

Q. Pivoting about a pivot point of the structure, or the pin? A. That is correct. Now, as the note below the drawing indicates, this Cobb structure also includes each of the seven elements listed in the title of this chart.

Q. Is there anything in particular in the specifications of that patent which would provide any further help in [454] understanding the structure or operation of that disclosure? A. Well, not specifically. Of course the structure is described in possibly even more detail than I have described it, but nothing special there.

Q. Just as a point of interest, the member which you have colored in yellow here and have called the fixed clamp member, is that in the specifications of the patent called a bail? A. A hinging bail.

Q. A hinging bail? A. Yes.

Q. All right. Now then, what is the next disclosure of prior art which merits some consideration, as shown on this chart? A. The next disclosure is the one immediately above Cobb. In other words, the first one to the right of the title at the upper portion of this chart, Defendants' Exhibit 11, and is the patent to Rix, 287,965, also issued in 1883, and I have prepared a colored enlargement of the sheet of figures of that patent, which I believe we could helpfully refer to, and which has been marked for identification as Defendants' Exhibit 13.

Q. Using the colored enlargement primarily, Mr. Fishleigh, [455] will you please describe and explain that structure and its mode of operation. A. As the title indicates, the Rix patent is also a structure for use as a harrow or an improvement in harrows. Here we have, as shown in Fig. 1 or Fig. 2, a frame member designated "B" and colored violet. Fixed to that frame member is a member colored yellow and marked "n" in the form of a pivot eye and a bolt extending through the frame member and held in place by a nut on the left-hand side of the frame member as we see it in these drawings. Pivotally connected to that fixed member by means of a bolt—or a pin, and it is the pin which is marked "n" and the fixed member appears to be a "v", but pivotally connected by means of the pin "n" colored light blue, is a hinged mem-

ber "c" colored dark green in part and in part a light green, as I will point out later.

That hinged member has a plate section which has a vertically extending flat face as wide as the shank and of substantial length in a vertical direction, in the direction of the shank at that point. It also has a pair of ears extending to the left from the plate member as we see it in Fig. 3 of the drawings, and there is one that we see and one on the other side which is not visible in the drawing, such that it [456] comes down and the pivot pin "n" passes through the holes in those ears to provide for the pivotal movement of that hinged member "c". The hinged member also has a stirrup type member "v". I don't just locate the name that is used in the patent, but it is a stirrup type member, in this case extending to the right from the hinged member, of such a shape and configuration that the upper part, the upper straight part of the tool member, the tool shank, can be passed through that and supported thereby.

In addition to the stirrup member "v", colored light green, the shank of the tool is fastened to the hinged member by means of a bolt and nut, also colored light green, and identified by the small letter "e".

At the upper end of the hinged member is a slot, unnumbered but shown uncolored in the upper end in Figs. 3 and 4 on Defendants' Exhibit 13, and there is a plate and curved rod marked "A", about which is a spring member, and that rod passes through the slot in the top of the hinged member and then a nut "e" is added to the end of the rod. and the arrangement is such that as shown in the dashed lines in both Figs. 1 and 2, the spring tends to press the hinged member "c". the upper part to the right or to rotate [457] it in a clockwise direction so that the upper part of the hinged member is held against the nut "e" as a stop member.

Q. Stop there just a moment, Mr. Fishleigh. In the dotted lines, the position of the hinge member and the upper end of the ground working element, would that be the position that you would call normal operating position? A. Yes. The entire structure is shown in that form and then either to indicate the movement forward of

the device or to help clarify the two showings, it is shown moved further to the left. In fact, what is being shown is the action there as the device would move forward with the tool in contact with an obstruction such as shown at "x".

Q. So that the solid lines then show it in a somewhat pivoted position as the tool is clearing a root or some other type of obstruction? A. That is correct.

Q. All right. A. Now, the arrangement then is such that in normal operation, normal conditions, the spring "A" will push the upper end of the hinged member clockwise up against the stop "e" on the end of the rod about which the spring is mounted, and hold it in an operating or normal operating condition.

[458] As the device travels through the ground, that is, as the tool travels through the ground and the frame of the plow is moved forward from right to left, as shown in Figs. 1 and 2, the tool will tend to vibrate, and if the tool hits an obstruction the point of the tool will be moved backward and upward relative to the pivoted point or framework until the end of the tool will slide over the obstruction, and in the course of so doing the spring "A" will be compressed and energy stored in it, so that once the tool has cleared the obstruction the spring will tend to return the tool to its normal operating position with the top end of the hinged member pressing against the nut "e" to perform the stop or positioning function.

Q. Referring to the specifications of the patent, I believe you stated a moment ago that you couldn't pick out right quickly the language used in describing what you called the stirrup "v". I think you will find if you look in line 4 of the first column that that element is described as a loop. Did I say line 4? Line 24 of the first column. A. Yes, that is correct. I should have seen it, because I have it underscored in red. The loop "v" which surrounds the tooth. But I can say so far as functioning [459 and 460] is concerned it has the same functioning as the devices which have heretofore in this trial been called stirrups.

* * *

Q. Does the shank attaching pivoted element, as shown in the Rix patent, Mr. Fishleigh, have any resemblance to shank attaching members which have been in evidence and discussed here during the past three days? A. Yes. The shank attaching member or hinged member of Rix bears a marked resemblance, having a long, flat platelike portion, a stirrup portion, and a pair of lugs which serve to pivot the structure in much the same manner and in some degrees in almost the same detail as that shown in the Graham patent in suit, 798.

Q. I would like to note one item here on the enlargement, Defendants' Exhibit 13. I see that you have the plate portion to which the spring member is attached or mounted colored in brown rather than yellow. Is there [461] any particular reason for in that instance coloring that spring support brown rather than yellow? A. No particular point. I felt that that entire spring mounting mechanism could well be colored in the brown, but it could very well be colored as yellow as a fixed member of some sort attached to the framework.

Q. Actually of course it has no direct association with the part which you have colored in yellow, does it? A. No.

Q. Its association is by means of being attached to the same frame member of the plow? A. That is right.

Q. Of the structural elements set up on the chart, which ones do you find present in the Rix disclosure? A. I find all seven present in Rix.

Q. Will you turn next to the next item or part of the prior art which you would like to explain. A. The next one which I have listed is the Graham 811 patent.

Q. Have you prepared also colored enlargements of those drawings, the 811— A. Yes, I have prepared colored enlargements of the three sheets of drawings of the Graham 811 patent, which have been marked respectively as Defendants' Exhibits 14-A, 14-B and 14-C. That is the structure [462] which is shown here in the large chart, Defendants' Exhibit 11, directly below the title at the bottom of the chart.

Q. Before you start your explanation there, Mr. Fishleigh, is this now the first of the prior art disclosures that

you considered which were cited by the Patent Office in the history of this patent? A. I think so, but I would have to check that.

That is correct.

Q. Neither Dunbar, Cobb nor the Rix patents were cited in the file wrapper? A. No, they were not.

Q. All right. Go ahead with your explanation, please

The Court: You say neither Dunbar, Rix, nor Cobb was cited?

Mr. Morris: None of those three was cited by the Patent Office.

Q. (By Mr. Morris) Is that correct? A. That is correct.

Q. Proceed with your explanation then of the Graham 811 disclosure. A. As the title indicates, this Graham patent, at least the portion we are concerned with, covers a clamp or mounting for a so-called vibrating plow. The principal difference, just in glancing at the structures, in this [463] structure from those that we have seen previously, is that the main part of the shank runs in a horizontal direction, that is, the upper part of the shank in the Graham 811, whereas the shanks of the tools were generally—that is, the upper portion was in a vertical direction in the other three structures, and the clamping means rather generally could be said to be turned over 90 degrees here from what we had previously.

In this Graham 811 patent there is a frame member shown as an I-beam, sometimes also referred to as an H-beam when it is turned the other direction, and of course gets its name from the configuration as one looks at the end of the beam or a cross section of it such as shown in Figs. 4 and 5 on Defendants' Exhibit 14-B.

There is in addition to that a fixed member, referred to generally in this structure as 11, I believe it is, and in any event colored yellow in the drawings in all cases in this structure. Now that fixed member is such that it conforms generally to the shape of the lower—has an opening which conforms generally to the shape of the lower flange of the I-beam, and in this structure had the rather cumbersome method of assembly of having to be put onto the I-

beam or plow frame member by starting at one end and sliding it [464] across, so that if one happened to want to get out—take off or put on the member that I am pointing to here in the middle of the middle frame, you would have to do a certain amount of disassembling and take off some of the other clamps in order to get to it.

Q. Mr. Fishleigh, that particular detail, of course, while it was a drawback of the particular disclosure there, does it have any significance to the issues under consideration here? A. No.

Q. All right. A. Now, that fixed member has a lower longitudinally extending surface which in these drawings we have colored red, and which is referred to, I believe, as 56 in this structure. And on either side of this relatively wide and relatively long longitudinally extending lower face there are a pair of flanges which extend down, marked 54 and 55, so that a channel-type formation is provided or what might be called a way into which the shank upper part or forward part of the shank member and the hinged member or fulcrum plate can be mounted.

At the back end, toward the back of those side flange members and at the rear of the longitudinally extending face, but below that, extending downwardly [465] are a pair of ears, one on either side, marked 39 and—well, 59 and 60. Yes, the number was 59 rather than 39; 59 and 60. Those ears are provided with openings 61 through which a pivot pin 62, colored light blue, extends.

Then there is a fulcrum plate member 63, which has a longitudinally extending upper face "63" relatively wide and quite long and flat, and in the bottom of that member there are two transverse grooves 65 and 68. The groove 65 is provided for association with the pivot pin 62 and, as has been demonstrated, the purpose of that groove is to permit the fulcrum plate to be positioned and pivot about that pivot pin 62 in the course of the normal operation of the device. That relationship is shown in Figs. 4 and 5 of Defendants' Exhibit 14-B.

At the opposite end the transverse groove is for association with the portion of a T-headed rod or bolt that I will come back to shortly. Also at the back end or toward the rear—it is toward the forward end as the device is mounted

on the plow, to the right-hand, lower right-hand end of the—at the fulcrum end as we see it in Defendants' Exhibit 14-C, there is an oblong hole 69 that extends through the fulcrum plate. Mounted between the fulcrum plate and the [466] bottom longitudinal member or face 56 of the fixed member is the upper portion of the shank, that shank being numbered generally as 33, the upper portion 34 and the entire tool shank being colored pink in this series of drawings, Defendants' Exhibit 14-A, B and C.

The forward end or the lower right end, as we see it in Fig. 7 of these drawings of the shank member, has an oblong hole 70, and also in the fixed member there is a forwardly extending portion 57 which also has an oblong hole 58.

When assembled into the position shown in Fig. 4, that is, the relative position of the fulcrum plate or hinged member 63 and the shank 33, 34, the T-bolt 71 may be put through, pushed up through the holes 69, 70 and 58, and then encircled by a spring member, coil spring member 66 in the position such as shown in Fig. 6 on Defendants' Exhibit 14-C, with the bottom of that spring member seated upon the portion 57 of the fixed member, and the upper portion of the spring associated with a washer and nut to the T-bolt and through that back down to the hinged member.

Now, in normal operating position, that is, at the start, nut 76 is end up so that the spring 66 exerts sufficient pressure or pull upon the fulcrum plate so as to hold the shank member and the fulcrum [467] plate in the operating position with the upper portion of the shank member contacting the lower portion, the lower face in part at least of the fixed member, to provide a stop means and hold the shank and the hinged member in normal operating position.

During operation of the device the shank member will tremble or vibrate as described for the Dunbar structure in the Dunbar patent, and when and if—

Q. Let me stop you there just a minute, if I may, Mr. Fishleigh. In describing the vibratory action of the tool or disclosing it in the patent itself, here in Fig. 4 is there anything there to indicate the vibratory action of the tool?

A. Yes. The contour of the bottom part behind the tool, and I should say in this instance that the movement of the plow is from left to right, as shown in these drawings, and thus the part to the left of the tool itself indicates the territory or the part of the ground which has been covered by the tool. The undulating shape of the bottom into ridges "a" and valleys "b" indicates vibrating—an attempt to illustrate what purportedly occurs in the way of a vibrating action of the plow point to provide this irregular, rough bottom to the furrow under the tool.

Q. Would that be an anticipated or expected type of action [468] with a spring tooth shank as is disclosed here? A. Yes.

Q. And would that be true whether it was mounted with a fixed clamp or a spring clamp? A. Yes. That particular type of action, as I understand it, results not from the action of the spring clamp but from the resilient action of the shank of the tool itself.

Q. All right. Now go ahead with your explanation, please. A. Now, when and if an obstruction is encountered by the point of the tool or other portion of the tool, the tendency will be for the tool in this instance. as we see it in Figs. 4 and 5 of Defendants' Exhibit 14-B, to move to the left and upwardly—

Q. Just a moment. Is there any disclosure in Fig. 4 of the rocking action or pivotal action now which you are commencing to describe? A. No, but that shows what you have called the home base position, the starting position, whereas Fig. 5 shows the position to which the tool has moved as a result of hitting, in this instance, apparently hard ground, because no specific obstruction is illustrated.

Q. All right. Go ahead. Excuse the interruption. A. In any event, the tendency would be to move up and backward as far as the frame of the tool is concerned [469] in such a way as to produce forces tending to pivot the frame and the hinged member about the pivot pin 62.

Q. Now. you say pivot frame and the hinge member? A. Well, that is the start. Now I will come into the detailed departure from—well, the frame? No. If I said frame I meant shank.

Q. All right. You meant shank. A. Now, in this particular structure, because of its special arrangement, there is a slight clearance between the shank and the fixed member and the shank will then pivot, as has been previously indicated, about the rear end of the longitudinal underface of the fixed member, that is, the point to which I am now pointing, and the point just slightly—just below and slightly to the left of the lower left-hand end of the lower flange of the I-beam frame member. So the pivotal action will be there, but in the meantime the right-hand end, because of the tendency for counterclockwise movement of the shank and hinged member, regardless of the small difference in pivot points, the tendency will be for the right-hand or forward end of the shank and hinged member to move downwardly, also in a generally counterclockwise direction, about the pivot points, and that will compress the spring that will pull the rod 71 downwardly and compress the spring 66, storing [470] energy therein.

Q. Excuse me again, please. The forward end you said would tend to pivot in a counterclockwise direction. Did you mean in a clockwise direction? A. Well, if I did I misspoke once more.

Q. All right. A. In a clockwise direction. In any event, it will tend to compress the spring 66 and store energy so that when the obstruction is passed and the tool is free to return to its normal operating position or to return at least part way to that position, the force of the spring will pull up the forward end and this time in a counterclockwise pivoting direction, pulling up this right-hand end as shown in Figs. 4 and 5, until the upper face of the shank contacts the lower longitudinal face of the fixed member and those two function as a stop means to position the tool in normal home base or normal operating position and condition.

Q. Now then, Mr. Fishleigh, how many of the mechanical structural elements as set out on the chart do you find present in the Graham 811 structure? A. I find six of the seven elements present in this Graham 811 structure. the one which is missing being the one numbered 6 in the title, that is, "Means for connecting the shank to the pivoted shank attaching member."

Q. Why is it that you have concluded that that element is not found in the Graham 811 structure? A. Because with this arrangement, as has been indicated earlier today, there is a floating attachment, a floating relationship between the shank and the hinged member, and as the device operates there is a degree of longitudinal movement as between the two, the only means of pulling the shank forward being through this spring rod 71, and while they are held together, that is, the fixed member, the shank and the pivoted member are held together by the spring pressure in the position shown in Fig. 4, there is no attachment or connection in the sense at least of the 798 patent which has formed the basis of these structural elements.

Q. Would it be accurate to say that there is a means disclosed which prevents the shank from being pulled out of the device? A. Oh, certainly.

Q. But that that is not a means which connects the shank and the shank attaching member together in the sense of the structural element of the 798 patent? A. That is correct.

Q. Now, Mr. Fishleigh, have you examined the actual commercial clamp structure, the 811 structure, of the type which has been identified here as Defendants' [472] Exhibit 6? A. Yes, I have examined this structure, I have seen that type of device operate in the field, I have examined the wear of them in instances both in 1951 and more recently in 1961, and have seen them in operation in the field, both under what might be called demonstrating conditions and in the field in actual service conditions.

Q. Are the mechanical elements as set out on the chart there found in the commercial structure, Defendants' Exhibit 6? A. Yes, there is structure in this Defendants' Exhibit 6 which provides a response for those elements, and which could be said to be structure as defined by those various elements.

Q. Do you find on this particular exhibit a further element or a portion of the clamp which is not actually set out in the Graham 811 patent disclosure? A. Yes.

Q. What is that? A. There is a brace member with which I was quite familiar in the so-called brace clamp,

which was in suit in the first Graham-Jeoffroy case and which was held to be invalid.

Q. Would that in any way affect your finding in response [473] to the mechanical elements that are described on the chart in this structure? A. No. That is just an additional bracing action operation, such as you might stick a 2-by-4 up if you had a wall that was sort of falling down.

* * *

Q. (By Mr. Morris) Mr. Fishleigh, will you turn now to a consideration of the next portion of the prior art which you would like to explain to the Court. A. I would like to turn to the Traeger patent, shown in the lower right-hand corner of that chart, and that is—

Q. Is that as shown in the Traeger patent? A. Yes, 111,910, Australia.

[474] Q. Now, this was one of the patents which was cited by the Patent Office in the file history of this patent, was it not? A. That is correct.

Q. Do you have colored enlargements of the sheet of drawings to that patent? A. Yes, I have.

Q. I notice that you have placed on the easel a colored enlargement identified as Plaintiffs' Exhibit 15. Will you use that exhibit, please, and explain the structure of the Traeger disclosure, the structure and operation. A. The Traeger structure is entitled, "An improved spring tyne for agricultural implements." As shown generally, there is what is called an "S" form of tine or tool shank in the terms which we have been discussing, including the portions that I have colored yellow and pink. It is contemplated but not indicated in detail that the upper end of such an S-shaped tine will be fastened to a frame member. But where many such S-shaped tine member had been fastened with rigid clamps to a frame member and the entire operation dependent upon the resiliency of the S-shaped member, the entire tine member, in this case Traeger introduces a spring clamp arrangement as between the upper left-hand portion of the S-shaped tine and the lower portion, as between the [475] portions marked 1 and 2, and consequently for this analysis I have colored

portion 1 in yellow as being the fixed member as far as this clamp is concerned, although clearly it is a flexible member and it itself is attached back at its upper end or expected to be attached to a frame member.

The Court: Where would it be attached to the frame member?

A. What part of the tine?

The Court: Yes.

A. The upper left-hand section to which I am now pointing.

Q. And could the frame member be either situated underneath that particular extension or above the extension, Mr. Fishleigh? A. Yes.

Q. And would be fastened in the usual means by bolts or something of that sort? A. That is correct.

Mr. Fishburn: I don't like to keep harping on this subject, but I think counsel is still leading his witness.

Mr. Morris: You are right again, Mr. Fishburn. I will try to watch it.

A. As far as the spring clamp arrangement is concerned, we have the portion 1 of the tine member colored yellow [476] and it has a reinforcing member marked 15 of comparable shape and inserted in the curve. The member 1 at its lower right-hand end is formed into an eye loop, marked 4, which serves as the bearing for a pivot pin 3. The pivot pin 3, as shown both in Figs. 1 and 2, also carries in pivotal relationship a hinged member 5, colored dark green, and that hinged member is a sort of U-shaped member with the upstanding flanges, as we see them here in Figs. 1 and 3, and also a flange extending underneath the shank 2, as we see it in cross section here in Fig. 3. One of the flanges such as shown in Fig.—that is, the vertically extending flanges 5, such as we see here in Fig. 1, is at either end of the pivot pin as shown, for example, at the two ends here in Fig. 2.

Then there is a second member, that is, the shank member 2 at its upper left-hand end also is formed into a loop carrying a pivot, that pivot being the end of the bolt 11, which I will return to. Then that shank member is connected by means of a small rivet marked 6 in Fig. 1, and

marked 6 in its tilted or dash-dot line position in Fig. 3. So that it is riveted to the lower horizontal flange of the hinged member.

A pin or a rod, curved rod 11, which is [477] fastened through a bolt member, pivot pin 12, as shown here, in fact there are two such rods as shown here in Fig. 2, extend upwardly from the other outside edges of the shank member 2 up through the hole in the yellow fixed member 1 and the member 15, and a plate, small plate 13, as shown here in Fig. 2, extending from side to side, and then there are springs 10 colored orange slid over the upper portion of that rod or those rods 11, and held in position and their tension or compression adjusted by means of a washer 17 and a pair of nuts 16. In that condition the springs tend to hold the upper left-hand end of the shank portion 2, as we see it in Fig. 3, up against and in contact with the bottom face of the member 1. That is, there is of course on this member 1 a longitudinally extending face which is colored red in Fig. 3, and a similar longitudinally extending upper face on the shank member, also colored red, in Fig. 3, and under the action of the spring member 10 those two are moved into contact to provide a stop function and position the tool member, tool shank 2, with the tool member at its lower end in proper operating condition.

Now, when and if the tool hits an obstruction, as the device is carried forward, and in this instance the movement of the device would be from right to left, [478] as shown here on Defendants' Exhibit 15, when an obstruction is encountered, the tool would tend to move from the full line colored position of Fig. 3 to the dash-dot position of Fig. 3, the point of the tool moving rearwardly and upwardly with respect to the movement of the plow or agricultural implement pivoting about the pivot pin 3 so that the upper left-hand end of the shank member 2 and the pivot pin 12 would move downwardly in a counterclockwise direction from the full line colored position to the dashed outline position, and in so doing would tend to compress the spring 10 and store energy therein.

As soon as the obstruction was passed, the spring would tend to return the shank member 2 and its point to the

normal operating position, with the upper face, marked red here on the upper left portion of the shank 2, in contact with the lower longitudinally extending surface or face on the bottom of the fixed member 1, and thereby return the device to its so-called home base position or its position for normal operation.

Q. Mr. Fishleigh, in that particular structure, while you have colored, as you have already pointed out here, the forward extending portion of the S-shaped tine in yellow, would it be understood that that particular portion would likewise have some flexibility which [479] would tend to flex downwardly or upwardly as forces were encountered on the point of the ground working tool? A. That is correct, that is what I have—

Mr. Fishburn: If Your Honor please, that calls for a conclusion of the witness; is very leading also, Your Honor.

The Court: Well, I think it is leading. I think it is rather obvious.

Q. (By Mr. Morris) Insofar as the association of the pink colored portion of the tine with the yellow portion, though, is there a fixed point at the pivot pin so that the pink portion will pivot around the pivot pin? A. Yes. The pink portion, because of its attachment or connection to the hinged member shown in dark green, does pivot about the pivot pin and comes back to a stopped position, determined by the contact of the two faces of the pink and yellow members.

Q. And while the pivot pin might change its position in relation to the frame of the plow, insofar as the relation of the two parts of the tine, it would remain—would it remain constant? A. Yes. I think we could perhaps say that, as a similar illustration, if we were talking about the action of a door and a door hinge, if we happen to have a door—talking about a door on a railroad car, where the car [480] itself was in motion, but in which the car served as a fixed member with respect to the door and its hinge.

Q. All right. Do you find any language in the specifications of this patent which is particularly helpful in describing the operation which you have just explained? I wonder if you would look, in particular, on the second page of the specifications, the second column on that page, com-

mencing at about line 9. A. Yes, I have that portion marked in my book. "A tyne constructed according to my invention will operate similarly to the tynes previously constructed, that is to say the tyne may act as an ordinary spring tyne, flexing along the upper curved portion of the 'S' and also along the lower curved portion heretofore. When, however, a stone or other obstruction is encountered requiring an unusual amount of movement the main flexing need not be taken by the upper or the lower curved portions of the 'S', but can be taken by the upward swinging of the lower part 2 of the tyne about the pivot 3 with consequent compression of the springs 10. So soon as the obstruction has been passed the springs cause the two parts of the tyne to return to normal relative position."

Q. Now then, referring again to the list of mechanical elements as set out on the chart, Defendants' Exhibit 11, [481] which of those do you find present in the Traeger disclosure? A. All seven of them.

Q. Does that complete your explanation of the Traeger disclosure? A. I believe it does, unless you have any further question.

* * *

The Court: We will be in recess until 9:30 Monday morning.

(Adjournment.)